a W. R. C. Smith publication

Textile Industries

Formerly "COTTON"

SEPTEMBER, 1955

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Serving America's Textile Leaders

The multi-million dollar modernization program now underway at the Southern Bleachery and Print Works, Inc., at Taylors, S. C., highlights the significant growth of this outstanding firm.

This comprehensive modernization throughout the mill includes several large additions to existing facilities, installation of the latest high-production machinery and equipment and rearrangement of production flow along modern lines

Robert and Company Associates, which for more than 40 years has been serving many of America's greatest textile names, is proud to be associated with Southern Bleachery and Print Works, Inc., as engineers on this large-scale modernization project.

For Over 40 Years

ROBERT AND COMPANY ASSOCIATES
Textile Engineering Division
ATLANTA

Serving the Great Names in Textiles

Alabama Mills, Inc.
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Cabin Crafts, Inc.
Chicopee Manufacturing Corp.
Cluett, Peabody & Co., Inc.
Crompton Company
Crystal Springs Bleachery
Davenport Hosiery Mills
Dixie Mercerizing Co.
Fieldcrest Mills, Inc.
B. F. Goodrich Company
The Goodyear Tire and Rubber Company
Mt. Vernon-Woodberry Mills, Inc.
Muscogee Manufacturing Co.
Peerless Woolen Mills
Pepperell Manufacturing Co.
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Swift Manufacturing Co.
Swift Spinning Mills
The Springs Cotton Mills
Thomaston Mills
United Merchans & Manufacturers Co., Inc.
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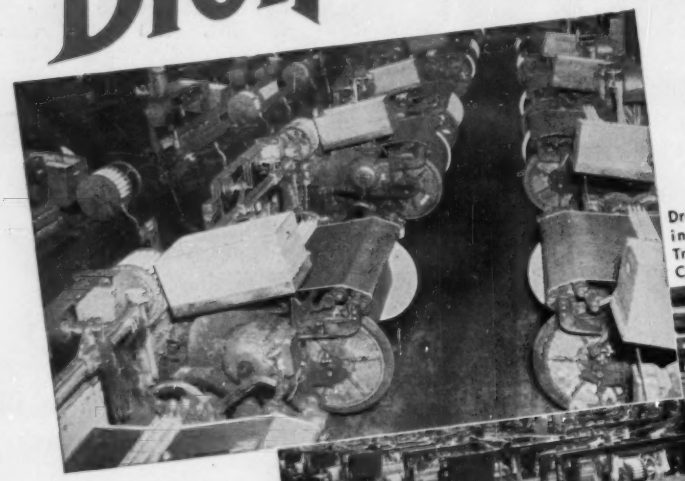
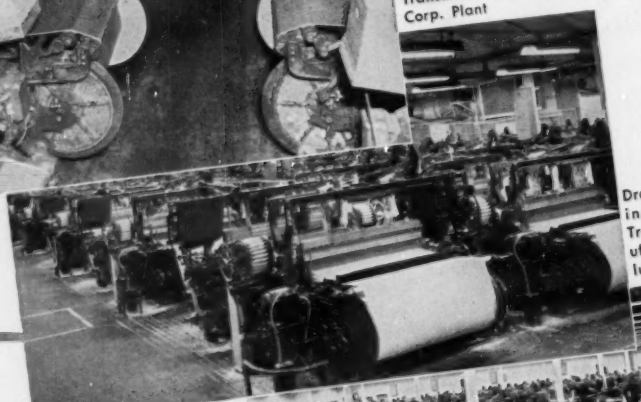
Diehl POWER TRANSMITTER

is assuring maximum weaving efficiency in leading mills

Thousands of Diehl Power Transmitters are operating DRAPER LOOMS in leading textile mills. Many have been in continuous operation for five years.



Draper X2 looms operating with Diehl Power Transmitters in Cone Mills Corp. Plant



Draper XD looms operating with Diehl Power Transmitters at Bibb Manufacturing Company, Columbus, Georgia.

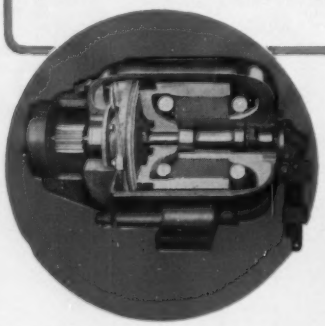
MILL MEN ARE ENTHUSIASTIC ABOUT THESE FEATURES

- "Stored energy" for smooth, rapid starts and positive picking.
- Precision braking.
- Minimum fluctuations of speed and motor current.
- Lower power consumption.
- Lower motor heat losses.
- Eliminates current regeneration.
- Simplicity and ease of maintenance.

. . . all of which adds up to increased mill production, improved quality of cloth, lowered operating costs and long, trouble-free service.

We will welcome an opportunity to tell you—without obligation—how the Diehl Power Transmitter can bring these benefits to you.

Draper XD looms operating with Diehl Power Transmitters at the Lyons Plant, Synthetic Division, M. Lowenstein and Sons.



This cutaway view illustrates the inverted construction of the power transmitter and shows the rotor which revolves around the outside of the stator on a hollow shaft—providing the essential inertia without the disadvantages of a separate fly wheel. Note the pinion driving shaft with attached clutch-plate which is shifted axially by simple lever at front end of motor, regulating clutch engagement pressure and providing controlled driving and braking action.

DIEHL MANUFACTURING COMPANY

Electrical Division of THE SINGER MANUFACTURING COMPANY

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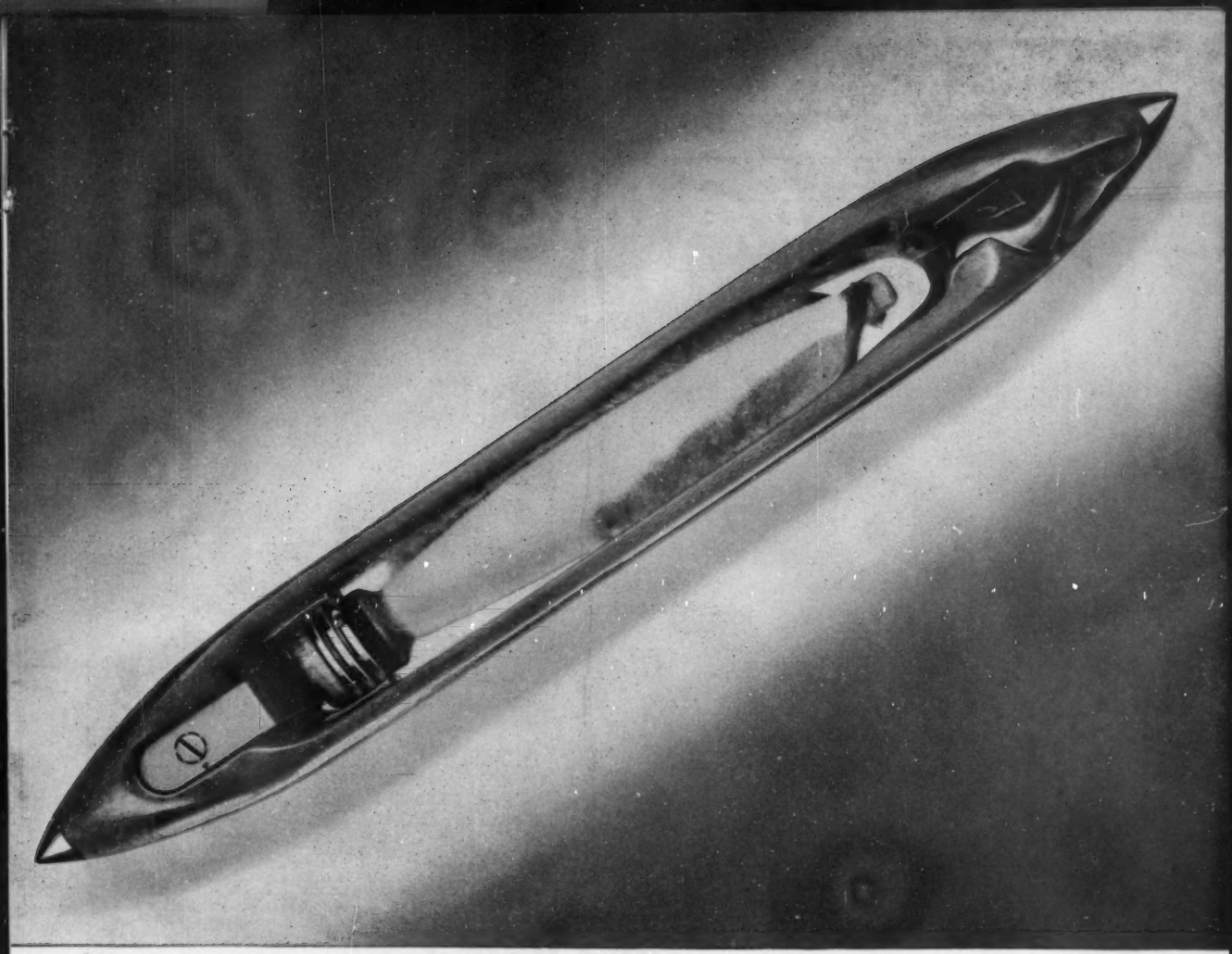
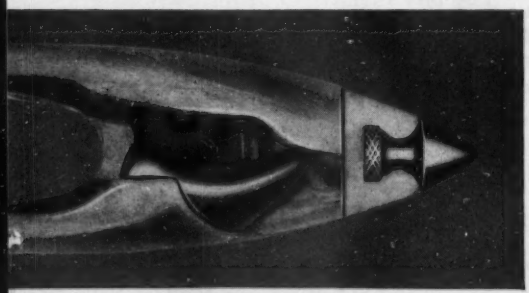


INCREASE SHUTTLE LIFE 2 TO 3 TIMES WITH "TRU-MOLD" . . . THE NEW DRAPER SHUTTLE



Sectional view of Shuttle Spur molded in fixed position

This is a fact confirmed by extensive mill trials.
Shuttle failure is reduced in the Draper "Tru-Mold" Shuttle because:

- The material used has the ability to completely resist atmospheric conditions in the weave room.
- Spurs are molded in the shuttle for permanent alignment.
- Shuttle eyes and springs remain in correct position due to the material used.

Currently available in three basic sizes, the new Draper "Tru-Mold" Shuttle offers greater shuttle economy and improved loom operation.

DRAPER CORPORATION

HOPEDALE, MASS.

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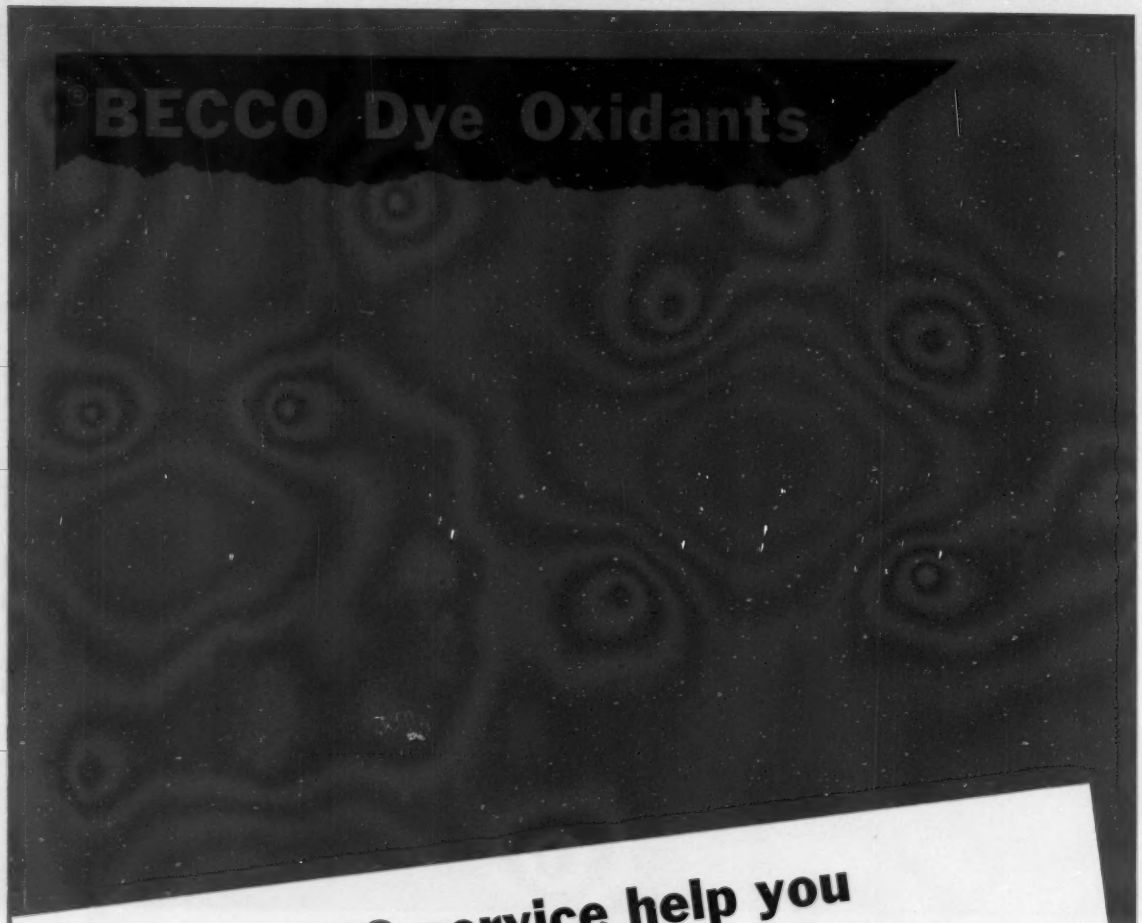

Can BECCO service help you with oxidation of sulfur colors or oxidation of vat dyes?

You can ask for Becco's trained engineers and chemists to help on your dyeing range or in your laboratory.

You will find tested methods—clean, fast and simple—described in Becco bulletins on oxidation of vat dyes with hydrogen peroxide or sodium perborate; on oxidation of sulfur dyes with ammonium persulfate.

You can count on prompt delivery by tank car, truck or drum of Becco chemicals of high purity and reactive effect.

Among interesting Becco bulletins available on request are:

2. Hydrogen Peroxide
38. Oxidation of Vat Dyes on Cotton and Synthetics with Hydrogen Peroxide
45. Sodium Perborate
49. Ammonium Persulfate

Ask for Becco Bulletins by number.

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NBP BPA

Textile Industries

Formerly "COTTON"

Vol. 119, No. 9
September, 1955

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Now TWO plants to serve you. Prompt delivery by our own fleet throughout the South and Southwest!

Shorts and Remnants

By J. C. C.

► And now comes September—a mighty fine month—ninth in the year—named after the Latin word for seven (Septemvir was the seven-man ruling body of Rome). So it's the ninth month and as we said a good one—season of harvest, kids going back to school, and when all good dyers and chemists go to Atlantic City for the AATCC Convention.

► We would say that will be a colorful meeting, but we said that last year, so just read this September issue—Wet Processing Review—if you want the finest information on dyeing, bleaching, finishing, printing, mercerizing, slashing, etc.

► Also, a season for surveys in which our good advertisers and prospects send out a lot of questionnaires to see which magazines their customers read. So mark down TI #1 if you get any of these and we will do the same for you some day.

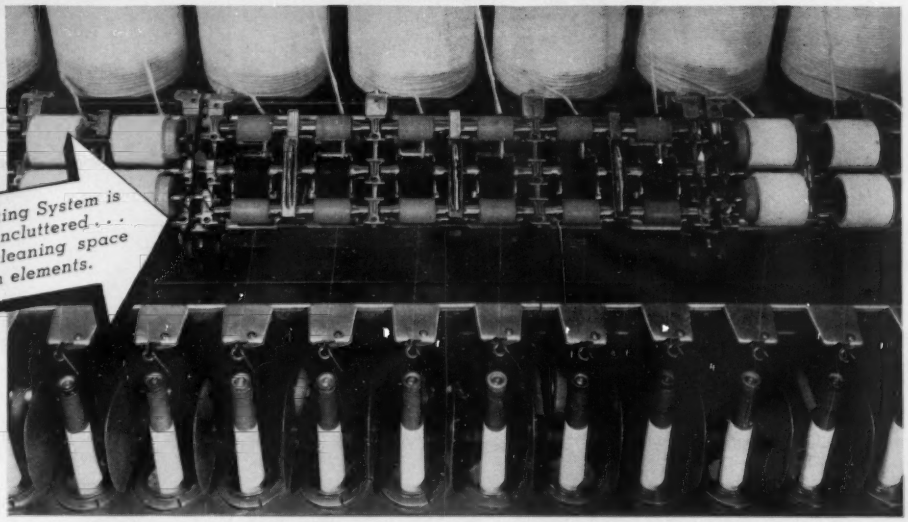
► One good reader writes us sending a copy of his answer to such a survey saying, "TI is the best read textile magazine in the whole South." Now that's true, but add the rest of the U.S.A. and about 50 other countries where textiles are made and say "It's the best read and the widest circulated textile magazine in the mills throughout the world." That's what a textile service quoting TI recently said and it's true, so help me. You can trust old S & R for the truth, the whole truth, etc.

► A good salesman friend down in Georgia also writes " . . . We think you have one of the best textile publications and we enjoy the articles each month. It is our hope that the advertising our Company is doing with you will prove mutually profitable." Amen. And we'll do all we can to make it so and thank you.

► 'Tis an age of science we're living in, indeed it is. And if you doubt it, look at good old Torrington delivering knitting machine needles by helicopter from their West Coast branch to California Hosiery Mills,

MODERNIZE SPINNING

. . . THE SIMPLEST, MOST EFFECTIVE (AND LEAST EXPENSIVE) WAY



Roberts Drafting System is simple and uncluttered . . . with more cleaning space between elements.

ROBERTS HIGH DRAFT

Simplest All variables eliminated. No bearing gadgets, springs, pivots, or other elements to vary from spindle to spindle or month to month.

Most Effective Concentrated tests prove higher break factors, lower ends down, better yarn evenness and greater consistency of performance.

Least Expensive The simple combination of gadget-free elements provide a lower first cost and the lowest maintenance cost.

ROBERTS HIGH DRAFT SPINNING MODERNIZATIONS

- Partial or complete Drafting System Changeovers
- Increased Draft Constant and Hardened Draft Gearing
- Streamlined Creels for Larger Packages
- Ball bearing Cylinders and Tape Tension Pulleys
- Increased Traverse on Bobbin
- Roller Bearing Spindles
- Rings and Ring Holders
- Inspection and Replacement of all other Parts

ROBERTS HIGH DRAFT DRAFTING SYSTEM

- a true double apron system
- a simple, uncluttered drafting system with all variable elements omitted
- the narrowest possible cradles, aprons and cots consistent with the gauge
- positively set and maintained top roll settings
- proper and unchanging weight distribution
- elimination or reduction of top roll and bottom roll lubrication
- strengthening of the draft gearing by use of hardened gears and studs plus increase in head-end roll neck diameters.

In addition to supplying all or any part of the above modernization material, we can provide a complete "turnkey job" including all installation and erection. The experience gained in the installation of more than 1¾ million spindles of Roberts High Draft is available to you on the smallest Changeover or the most complete Modernization.

ROBERTS COMPANY

Sanford, North Carolina, U. S. A.

...use the RIDGID 4P

2½" TO 4" GEARED PIPE THREADER

Here's a work-saving precision tool that cuts accurate threads on 2½" to 4" pipe *every time.* It's easy to handle . . . easy to use . . . foolproof.

Operated manually or with power, the RIDGID 4P reduces time, sweat and scrap in any piping job. Balanced handles simplify carrying and starting on pipe. Mistake-proof workholder sets to size *before* tool is put on pipe . . . has only one screw to tighten . . . no bushings.

For precision and speed . . . you can't beat the RIDGID *4P!*

See your local supplier . . . or write direct for catalog.

RIDGID
WORK-SAVER PIPE TOOLS

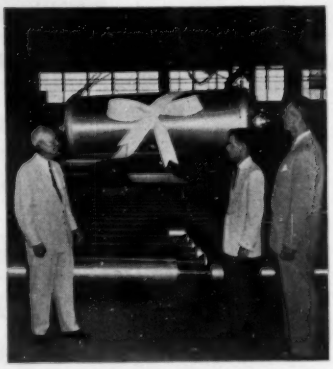
MANUFACTURED BY THE RIDGE TOOL CO. • 556 CLARK STREET • ELYRIA, OHIO

Shorts and Remnants

Anaheim, Calif., in 25 minutes. *Needles* to say (ouch) it had to be

California, but if you are in a hurry for needles, there's your answer.

► Maybe your taste runs more to drying cylinders tied up in pink ribbons. If so, we would say H. W. Butterworth & Sons Co. are your boys. Here we see **De Haven Butterworth,** V.P. (left), and **J. Ebert Butterworth,** Pres. (right), delivering



drying cylinder No. 75,000 to **Carl Schmidt, Jr.,** of J. P. Stevens & Co., Inc. This one is for the Delta Finishing Co. division at Clemson, S. C. 75,000 should rate a pink ribbon, we think.

Tufted Textiles

"In the June issue . . . there was a very interesting article on 'Tufted Textiles' . . . "

A. W. COOMBS
Asst. Pres.
Dixiana Mills, Inc.
Laurinburg, N. C.

► Mr. Coombs wanted 20 reprints. Other congratulations and reprint requests received on "Tufted" include: **J. Rogers,** Klug Engineering Service, Los Angeles, Calif.; **Francis J. E.**

Experimental lab with the right atmosphere

The A. French Textile School at the Georgia Institute of Technology in Atlanta, founded in 1899 to train textile engineers and administrators, is recognized today as one of the nation's foremost experimental schools.

Here, the subject of air conditioning in textile manufacture is truly "academic". For here, new manufacturing techniques are tried out and old ones re-tested. To provide the exact atmosphere needed for student experiments, an Amco Central Station Air Conditioning System is in operation. This complete AMCO system is invaluable. It mixes fresh and recirculated air, in proper proportions; delivers it to the work area, neither too "wet" nor too "dry" . . . but always at the proper degree of moisture and temperature for work in progress.

Over the years, the name AMCO has stood for leadership and outstanding quality in the manufacture of air conditioning systems. There is an Amco System to fit every need. An Amco engineer will gladly discuss the merits of the various systems available to you. Or, write for free copy of "Air Conditioning for the Textile Industry".

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Shorts and Remnants

Marples, Baumans & Cia, Buenos Aires, Argentenia; **J. A. Swainbank,** Scheuer & Co., N. Y.; **John MacMillan,** Rohm & Haas Co., Philadelphia, Pa.; **H. J. C. Lier,** N. V. Katoenspinnerij Bamshoeve, Enchede, Holland. And they are still coming in. Looks as if we underestimated the demand. We are already running short of these reprints.

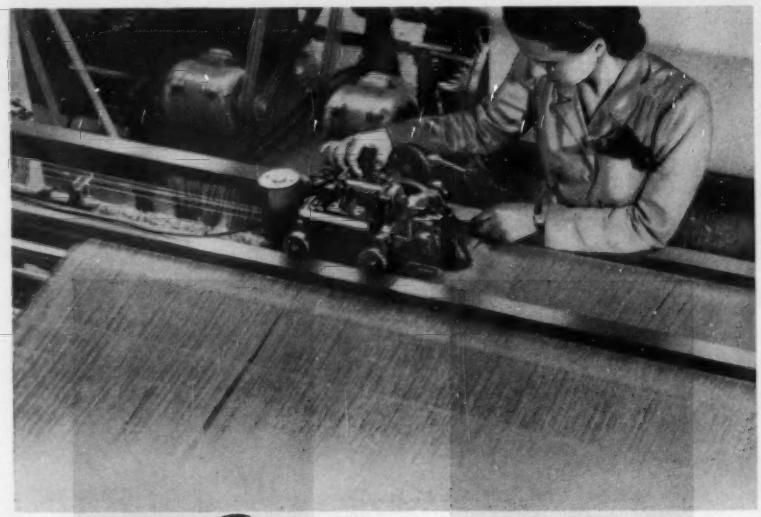
Before we leave tufteds, **Edward Mone,** A-L Textile, Inc., Somersworth, N. H., wants addresses of tufted machinery makers, especially those in New England. Sorry, Mr. Mone, but it looks as if all these folks are in Chattanooga, Tenn.

Inquiries

A description of a shuttleless loom from Hungary drew a number of requests, including inquiry cards from **A. J. Richards,** Supt., United Elastic Corp., Lowell, Mass.; **Albert W. Drobile,** Consultant, Philadelphia, Pa. Unfortunately, we told all we know. The Hungarian news service failed to mention the name of the maker.

While we are at it, the reader who asked for more data on the Robert Reiner doubling measuring machine from July p. 37 forgot to sign his name. And **Henry Skinner,** Mgr., Red Bank Mills, Lexington, S. C., sent us inquiries from another magazine. That's OK, send them on. We'll find it for you if we can.

Martin S. Richman, Art-Rich Mfg. Co., Dalton, Ga., wants a twister-winder as described in Jan. '55 p. 118 and made by Warner & Swasey Co., Cleveland, Ohio.



The *Proved*
USTER WARP TYING MACHINE

Modern Mills are choosing USTER because of its proved speed* its efficiency** and its versatility***

***Speed:** **Ties up to 128,000 ends in 8 hrs.**

****Efficiency:** **Entire warp tied in one single bite.** (Second warp can be prepared while first is being tied.)

*****Versatility:** **Ties two different yarn sizes together.** (Only minor adjustments, if any, are necessary to tie various yarn sizes.)

The precision-built USTER Warp Tying machine offers these outstanding advantages, yet is competitively priced. For the complete story, write

The Uster Corp., 2516 Wilkinson Blvd., Charlotte, N. C.

Many mills are finding it is to their advantage to avail themselves of our free consultant service.

TESTING EQUIPMENT — USTER — PREPARATION MACHINERY

Rayon Seat Covers

" . . . You will be doing Mr. Callaway (p. 14 Apr. '55) a great favor if you will insist that he buy seat covers made from American Enka's solution dyed high tenacity rayon which is sold under the trade name 'Jetspun' . . . Seat cover fabrics made from Jetspun yarns are made in his home town by Columbus Fiber Mills."

C. R. HALL
American Enka Corporation
Greensboro, N. C.

Tents Over Cones

"Regarding your article [Stretch Hosiery, June '55], we would like to know where it would be possible to obtain the tents over cones. . . . "

L. HAVSY
Havsy Knitted Sportswear Corp.
Brooklyn 17, N. Y.

► Looks as if these tents over cones came from William Bley, Inc., Southhampton, Pa.

Needs Extra Copy June

"We are enclosing under this cover our last issue of TEXTILE INDUSTRIES for June 1955. This issue was damaged in some way beyond use in the mails. Would you be so kind as to send us another copy, if available, of this damaged one."

J. D. GREEN
V.P.,
P. H. Hanes Knitting Co.
Hanes, N. C.

► It must have rained hard in Hanes, N. C., as that copy was soaked. Maybe we better get waterproof wrappers.

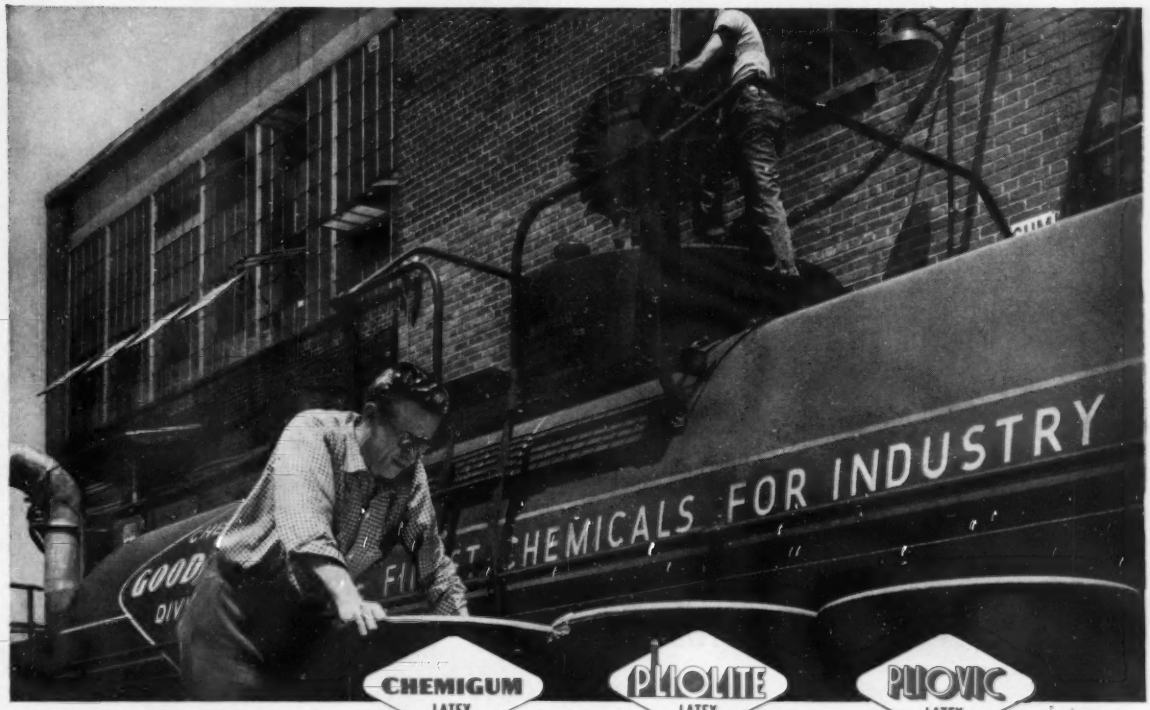
Quality Control ('51)

" . . . please mail me a reprint of your article entitled: 'Quality Control Of Cotton Fibers' [Aug. '51] . . . "

JAKOB SIMENSON
S. A. White Martins
Rio de Janeiro, Brazil

More "Training Seamers" ('53)

" . . . we should be grateful to you



"LIQUID ASSETS" FOR YOU?

COULD BE! Goodyear latices in the form of improved finishes, sizes, saturants, adhesives and pigment vehicles are proving "liquid assets" to many textile manufacturers.

Goodyear produces a number of these aqueous dispersions of synthetic rubbers and resins. They are available in three basic types and in a range of monomer ratios, solids contents, particle sizes and types of stabilization to give you a wide choice of physical properties and processing characteristics.

Lasting improvements in body, drape, dimensional stability and strength plus increased resistance to washing, wear, wrinkling, raveling, tearing, snagging and sliding—all these are possibilities with Goodyear latices. They can be used alone, in combination with each other or as modifiers of your present materials. And you'll find they process easily on standard equipment.

Full details, samples and technical help on latices by Goodyear—an old hand with these new materials—are yours by writing:

Goodyear, Chemical Division, Akron 16, Ohio

CHEMICAL GOODYEAR DIVISION

Can These Latices Be "Liquid Assets" For You?

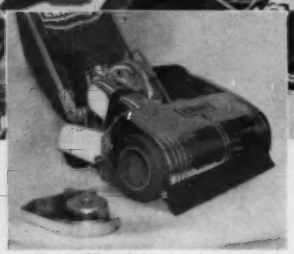
CHEMIGUM LATICES – oil-resistant, butadiene-acrylonitrile copolymers – medium to high nitrile content – high solids content – range of particle sizes – three types of stabilization

PLIOLITE LATICES – general purpose, butadiene-styrene copolymers – medium to high styrene content – low to high solids content – "hot" and "cold" types

PLIOVIC LATICES – vinyl copolymers – high vinyl content – high solids content

Chemigum, Pliobond, Plioflex, Pliolite, Plio-Tuf, Pliovic—T. M.'s The Goodyear Tire & Rubber Company, Akron, Ohio

The Finest Chemicals for Industry—CHEMIGUM · PLIOBOND · PLIOFLEX · PLIOLITE · PLIO-TUF · PLIOVIC · WING-CHEMICALS



Model "E" with hood and cover removed. Note vacuum skirt.

...faster, easier care of mill floors

TENNANT Model E

FLOOR MAINTENANCE MACHINE

Features

- Works FAST; propels itself.
- Rugged, yet weighs less than 90 lbs. Highly portable.
- Does CLEAN job; has new, powerful vacuum (3450 rpm fan).
- Operates on 115 v. AC.
- Has wax bar attachment for polishing office areas.

Exceptionally easy to use, this compact new 21" TENNANT Model "E" Machine offers important new advantages in floor care . . . in speed . . . convenience . . . low-cost operation.

It combines light weight (less than 90 lbs.) with a powerful vacuum and *self-propelling* action. Allows cleaning most areas 50% faster than with smaller TENNANT machines . . . and 3 to 4 times faster than with disc machines of comparable size.

Self-propelling; requires no skill

You simply guide the Model "E" at walking speed. Requires no skill, no handle pressure. It cleans a 21" path, has extra-low nose clearance, works in hard-to-reach areas.

You'll be delighted with the results. It whisks off light dirt and oily spillage . . . helps "heal" abrasions . . . restores gloss. *Send in the coupon for more details about this compact new machine. It is modestly priced and will pay for itself fast.*

Tennant 24" sweeper cleaning floors in mercerizing department.

G. H. TENNANT COMPANY
2524 N. 2nd St. • Minneapolis 11, Minn.

TENNANT

System of Floor Maintenance

Write today!

G. H. TENNANT COMPANY 11
Minneapolis 11, Minn.

Please send details about the new Tennant 21" Floor Maintenance Machine—the Model "E".

NAME_____

COMPANY_____

ADDRESS_____

SPECIALIZED MAINTENANCE EQUIPMENT

Shorts and Remnants

for sending us a copy of the article 'Training Seamer Operatives' [Apr. '53] . . . "

SUOMEN TRIKOO Oy.-Ab.
Tampere, Suomi-Finland

Set Up Draper Looms

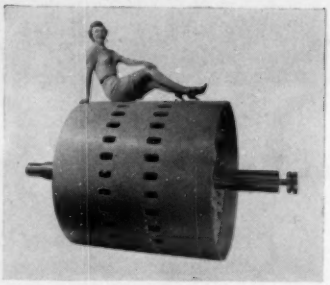
"Please send me the set-up of a L Model Loom (Draper). It is 92 and 100 in."

A. H. CHUMLEY
Gaffney, S. C.

► Now there's one we will let Draper answer.

Magnetic Pulley Fan?

In case you are interested in big magnetic pulleys, **Wm. E. Barta,** Adv. Mgr., Stearns Magnetic, Inc., Milwaukee 46, Wis., says they believe this to be the largest ever constructed.



Seems it weighs 24,000 pounds and has 17 miles of copper wire, etc., etc. Look at what the magnet draws.

Miscellaneous, Etc.

C. R. Walters of Abney Mills, Greenwood, S. C., wants the address of Southern Hotel Journal, Atlanta, Ga., which is now in Jacksonville, Fla.

Johnson & Johnson (Gt. Britain) Ltd. Slough, Bucks, England, wants copy of Feb. '55 Case Histories issue. Gladly sent.

A. L. Couturier, Waynesboro, Va., wants a list of cotton and rayon mills in Central and South America. "Textiles Panamericanos" would be only ones to have such a list if there is one.

Earl F. Sadlin, Thomaston, Ga., wants material on twisting and that's a large order.

► We get called lots of things but, so help me, a Detroit advertiser sends us his copy addressed to "FERTILE Industries." Should be something funny we could say about that, but as long as we get the advertising they can call us whatever they wish.

► See you next month!

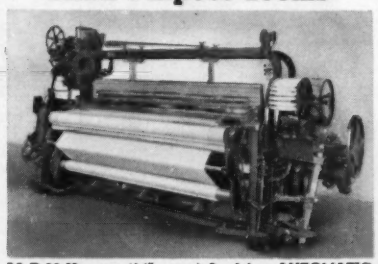
C&K builds the World's Longest Line of LOOMS

New M-P Looms ▶

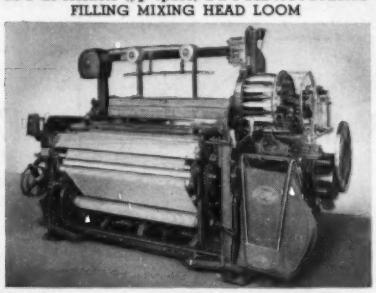
In the column immediately to the right are shown some of C&K's new Multi-Purpose Looms . . . quickly convertible because of their unequalled range of letoffs, takeups, shedding mechanisms, feelers and lay constructions . . . all on the same basic loom frame. (In column at far right are some of C&K's standard and special looms.) For full details, see C&K.

This "Invisible Trademark" Stands Back of the Trademarks of the World's Finest Fabrics . . . which are WOVEN Fabrics.

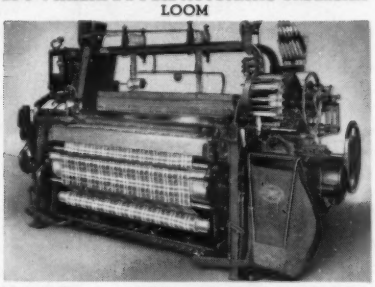
Multi-Purpose Looms



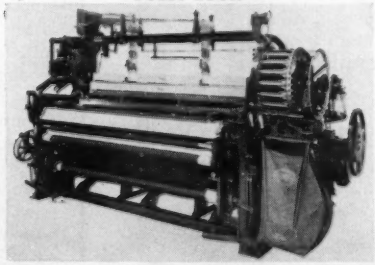
M-P 20 Harness (½" space) 2 x 1 box AUTOMATIC FILLING MIXING HEAD LOOM



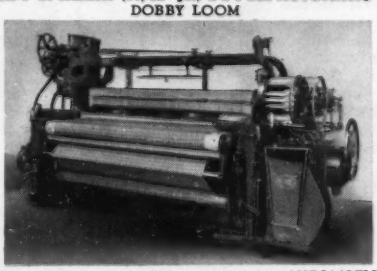
M-P 4 Harness 2 x 1 box AUTOMATIC UNDERCAM LOOM



M-P 20 Harness (15/32" ga.) 4 x 1 box AUTOMATIC DOBBY LOOM

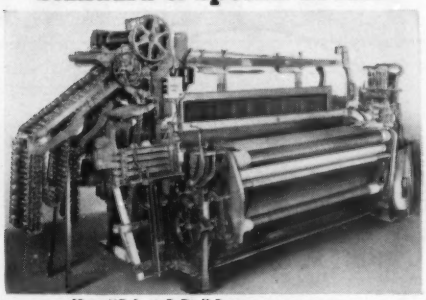


M-P 20 Harness (15/32" ga.) 2 x 1 box AUTOMATIC DOBBY LOOM

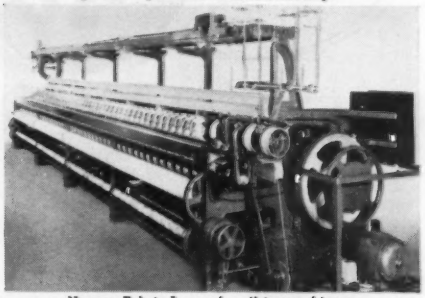


M-P 25 Harness (4/10" space) 4 x 1 box AUTOMATIC HEAD LOOM

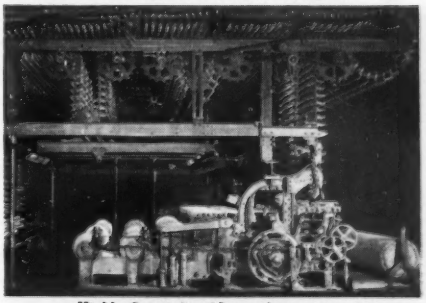
Standard & Special Looms



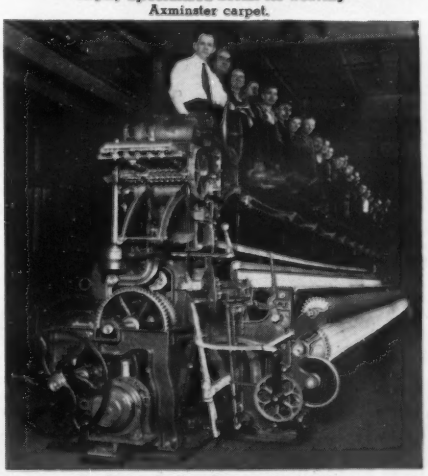
New "Select-A-Pic" Looms weave many pick-and-pick fabrics *automatically*.



Narrow-Fabric Looms for all types of tapes, webbing, ribbons, labels, belting.



Highly *Specialized* Looms for weaving Axminster carpet.



For Flat or Endless Papermakers' Felts . . . the widest looms for the widest fabrics woven.

Crompton & Knowles LOOM WORKS

WORCESTER 1, MASSACHUSETTS, U. S. A.

Charlotte, N. C. • Philadelphia, Pa. • Allentown, Pa.

Crompton & Knowles Jacquard & Supply Co., Pawtucket, R. I.

Dodenhoff Anti-Friction Dobby Loops*

Virtually Eliminate Jack Lever Wear

The roller bearing feature of these Dobby Loops gives you the smoothest rolling harness you ever saw. Steel stamped construction gives you approximately three times the strength of the usual cast iron types. Cleats and rollers are case hardened steel. You will save considerable money in replacement costs and in shut-down time when you install Dodenhoff Anti-Friction Dobby Loops. Order a supply today or write for samples and prices.

Carried in stock.

* Patented

W. D. DODENHOFF CO.
INCORPORATED
GREENVILLE, SOUTH CAROLINA

Personal NOTES

ABOUT MEN YOU KNOW

Now in charge of design and development for the automotive fabrics division of Deering, Milliken & Co., Inc., is **Jacques Arrouet** who came to the organization from the textiles division of U. S. Rubber Co.

New chairman of the Textile Engineering Division of the American Society of Mechanical Engineers is **Harold W. Ball,** chief engineer, Foster Machine Co., Westfield, Mass. A new member of the society's executive committee is **Dr. Konneth R. Fox** of Fabric Research Laboratories, Inc., Boston, Mass.

Robert H. Bishop, vice-president and general sales manager of Alexander Smith, Inc., has resigned. Succeeding Mr. Bishop as general sales manager is **John W. Allen** who has been with Alexander Smith for thirty-one years.

Recently promoted to manager of the Dublin (Ga.) Mills, a division of M. T. Stevens Southern division of J. P. Stevens & Co., Inc., was **Thomas D. Bruce.** Not only is Mr. Bruce responsible for the operation of the existing mill; he will also manage the mill for the production of stock dyed woolen fabrics which is now under construction. Succeeding Mr. Bruce as superintendent of the existing mill is **John A. Smyth,** formerly assistant superintendent. It was also announced that superintendent of the new mill will be **Robert J. Dinan** who was superintendent of the company's Tilton Mills in Northfield, N. H.

James Bruton, who has been an assistant wool buyer at Botany Mills, Inc., is now assistant to Mac Goldfine, vice-president of Lebanon (N. H.) Woolen Mills Corp. and Lebandale Mills and Northfield (Vt.) Mills. Mr. Bruton is located in the Boston office.

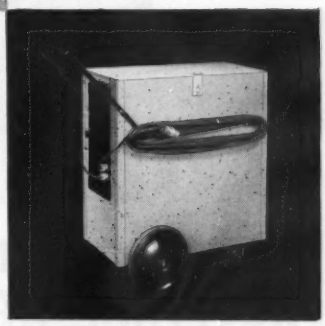
Notes from Dunson Division, Pepperell Mfg. Co., LaGrange, Ga.: **Ashton H. Cary** is now technical superintendent, succeeding Richard W. Wolfe who was promoted to superintendent. **John Heath** is now overseer of spinning, replacing **L. C. Stearns** who resigned to accept the position of general overseer of carding and spinning departments at the

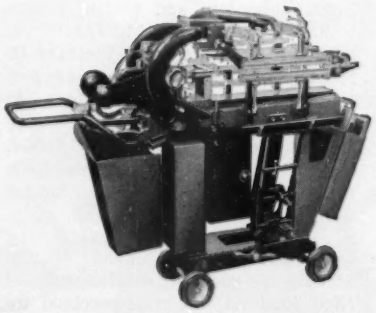
BARBER-COLMAN

SERIES "M" MODELS NOW MADE IN **10** SIZES
FROM 36" TO 126" BY 10" VARIATIONS

PORTABLE *Warp-Tying Machines* FOR ALL PURPOSES

The BARBER-COLMAN line of warp-tying machines has now been extended to cover practically every conceivable application. As noted above, the Type "M" machines are now available in *ten* sizes. These machines tie the *full width* of the warp in one operation, work directly in back of the loom, and are made in several types to tie-in cotton, spun yarns, filaments, wool, worsteds, or synthetic yarns from a flat sheet or from an end-and-end lease. When using a Type "M" Warp-Tying Machine, none of the weaving elements need be removed nor any of the loom settings disturbed. The picture at the right shows the special cart used for protecting the Knotter Unit when not in use and for carrying it from one frame to another when two or more are employed. This carrier also contains the variable speed-controller for the Knotter Unit. These machines are probably the most versatile available for most mill conditions.





IMPROVED SERIES "L" MODELS IDEAL FOR CERTAIN CONDITIONS

BARBER-COLMAN Model "L" machines are familiar to two generations or more of mill people, because they have been on the scene in one form or another for 45 years. The latest designs, one of which is shown here, have many up-to-date improvements which distinguish not only their appearance but also their operation and efficiency. These compact, versatile, and easily-moved machines have many important applications in both large and small mills. Barber-Colman representatives are thoroughly versed in the usefulness and applicability of both Model "L" and Model "M" machines, and can be consulted with confidence as to which might suit a given situation best. Also, it is important to know that all users of Barber-Colman machines are served promptly and skilfully by an alert service group of wide experience.

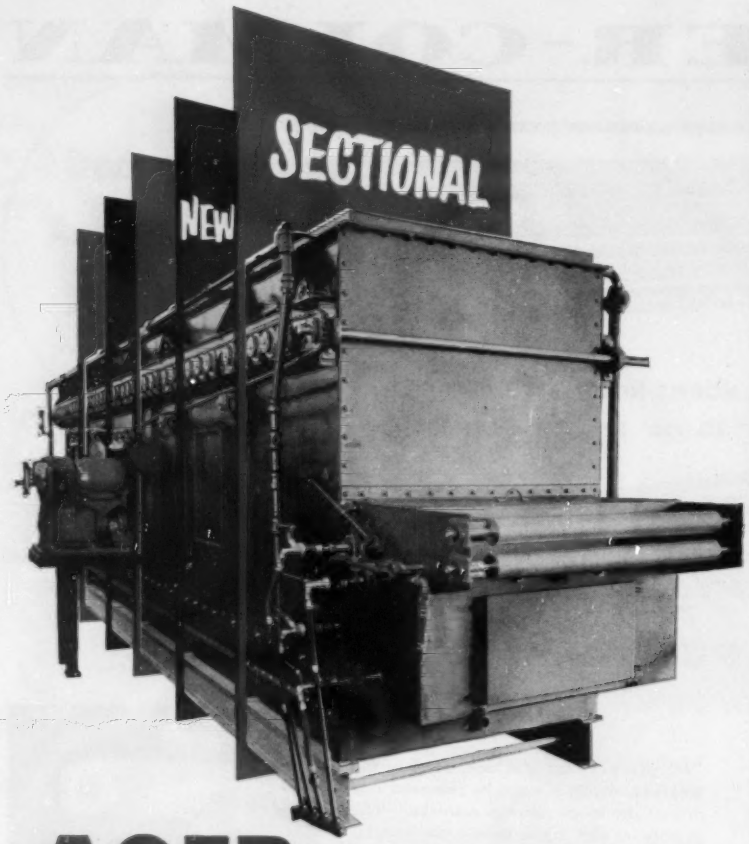
AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • WARP DRAWING MACHINES

BARBER-COLMAN COMPANY

ROCKFORD • ILLINOIS • U. S. A.

FRAMINGHAM, MASS., U. S. A. — GREENVILLE, S. C., U.S.A. — MANCHESTER, ENGLAND — MUNICH, GERMANY

INDIA	MEXICO	BRAZIL	JAPAN	PAKISTAN	PAKISTAN
Batliboi & Company Forbes Street, Fort Bombay, India	J. Rabasa Isabel la Catolica 45-513 Apartado 7348 Mexico D.F., Mexico	Quimanil S.A. Anilinas e Representacoes Rua Glicerio 537/547 Caixa 5658 e 3431 Sao Paulo, Brazil	Do-Yei Shoji Kabushiki Kaisha No. 7 Awajimchi 1-Chome Higashi-ku Osaka, Japan	Associated Agencies (M'cr.) Ltd. Piccadilly House 11 Piccadilly Manchester 1, England	Associated Agencies (M'cr.) Ltd. 27 Kothari Building Napier Road Karachi 2, Pakistan



AGER for ageing, steaming or continuous desizing of piece goods

This newest COOK AGER is built in sections allowing additional capacity to be added when needed. Each section is assembled at our plant and shipped as a unit ready to install, thus saving time and expense. The design and construction of this versatile machine permits it to be used interchangeably for ageing of goods printed with vat, acid or other types of colors. Sectional design is also used for steaming of goods dyed by the pad-steam continuous method or for continuous desizing of cotton and synthetic goods. Complete information will be furnished on request.

Cook P&N **MACHINE CO., INC.**

365 DORCHESTER AVE. BOSTON 27, MASS.

FINISHING, DYEING, BLEACHING, MERCERIZING, OPENING & WASHING RANGES

Personal NOTES ABOUT MEN YOU KNOW

Opp and Micolas Cotton Mills, Inc., Opp, Ala.

Dr. David M. Cates has been appointed as assistant director of chemical research in the School of Textiles at North Carolina State College. He is assisting in the chemical research and textile chemistry educational activities of the school.

F. M. Clark, formerly superintendent of Kennebec Mills in Fairfield, Maine, is now manager of the Tifton, Ga., plant of Amerotron Corp.

Vanette Hosiery Mills, Dallas, Tex., has a new vice-president—**Harker Collins** who came to Vanette from Diamond Hosiery Co. in High Point, N. C.

Frederic A. Cornell, manager of the two Rhode Island plants of Collins & Aikman Corp., has been promoted to general manager of the company's yarn manufacturing division. He has charge not only of the two Rhode Island plants but the spinning mill in Norwood, N. C., and the New York yarn sales office as well. Mr. Cornell continues to make his headquarters in West Barrington, R. I.

On the occasion of its 55th commencement, New Bedford (Mass.) Institute of Textiles and Technology honored the following by conferring honorary master of science degrees upon them: **Mark M. Duff,** a New Bedford banker and textile industrialist; **Walter S. MacPhail,** an executive at Wamsutta Mills; **John H. McMahon,** chairman of the board of Berkshire-Hathaway, Inc.; **John A. Shea,** area representative for Neuss Hesslein & Co.; and **Fred W. Steele,** executive secretary of the New Bedford Cotton Manufacturers Association.

Bernard Goldfine, head of the Strathmore chain of woolen mills in New England, recently received an honorary doctor of laws degree from New England College, Henniker, N. H.

Burt G. Hill is new manager of the finishing division, Pepperell (Ala.) Mfg. Co., replacing the late W. T. Kennedy.

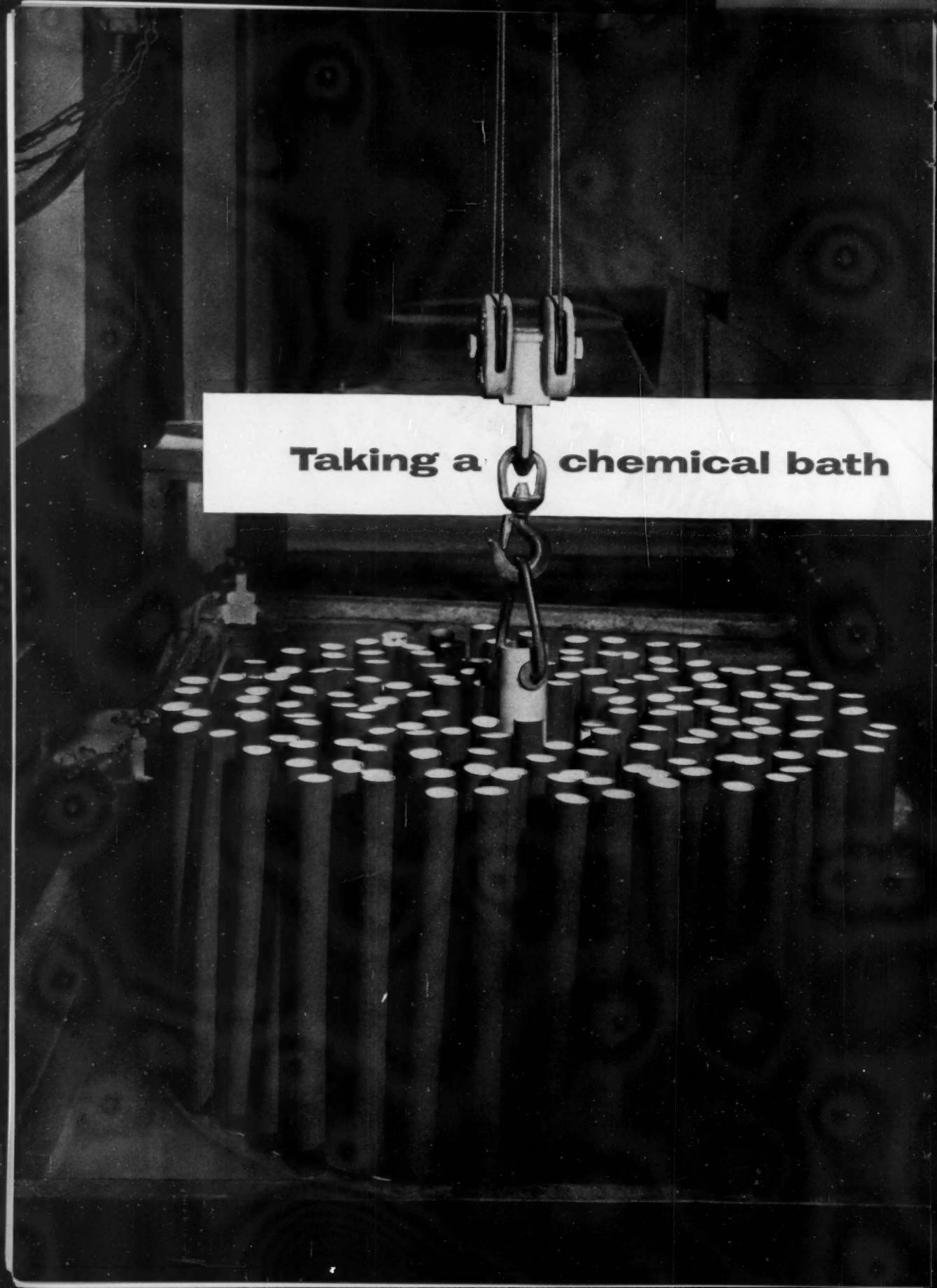
Chauncey W. Lever, director of industrial and public relations for Erwin Mills, Inc., Durham, N. C., has been appointed to the five-man com-

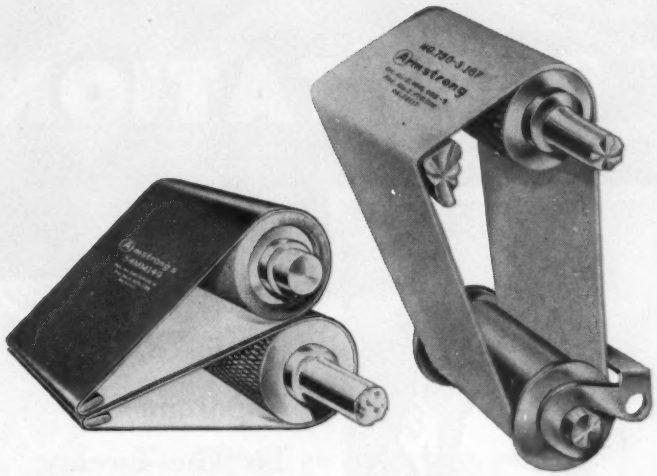
This blue which is extremely fast to light and washing on cottons, rayons, and linens makes fashion news wherever it appears. Naphthol AS creates this indispensable color for smart wardrobes in any season, and is a "natural" for summer washables.

Get samples and formula from Pfister.

Pfister Chemical Works INC.

Ridgefield, New Jersey


Taking a chemical bath



helps Accotex Aprons give

GOOD YARN CONTROL

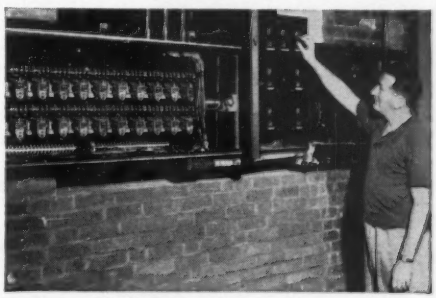
To make sure every Accotex® Apron provides exactly the right surface friction you need for good yarn control, each one is given a unique chemical bath.

There's nothing else like this patented treatment. An Armstrong-engineered relay panel automatically controls the movement of the aprons through a series of chemical baths. The temperature and the composition of the baths—as well as the time cycle—are held to rigid specifications. All this is done with split-second accuracy, with no chance for human error.

This special treatment is one of many steps Armstrong takes to give Accotex Aprons the drafting characteristics that are exactly right for today's single- or double-apron high-draft systems. Advanced production methods like this, backed by a continuing textile research program, are your assurance that Accotex Aprons will deliver top-quality yarn.

If you're not already using these aprons, arrange for a test frame next time your Armstrong representative calls. No matter what type of equipment you're using, there's an Accotex Apron specially engineered for the job.

For the booklet, "Armstrong Textile Roll Coverings and Mill Supplies," write Armstrong Cork Company, Industrial Division, 6409 Ivy Street, Lancaster, Pennsylvania.



Apron treating is automatically controlled from this single panel board. Here, a network of electrical relays actuates machinery which moves aprons from one chemical bath to another . . . places them in a cleaning solution . . . and removes them when surface characteristics are exactly right for good yarn control.

Armstrong ACCOTEX APRONS

. . . used wherever performance counts

REPUTATION

Is Mighty
Important
To The Twenty
Game Winners

One of a baseball pitcher's best stocks in trade is a fearsome reputation among batsmen on the other teams in the league. It's important that he maintain it!

It's also important to choose the electrical contractor with the best reputation to handle electrical projects in your mill. J. M. Clayton Co. has the reputation and the know-how . . . you'll hear the name mentioned wherever quality electrical contracting is being discussed.

WE'VE SERVED THE TEXTILE FIELD FOR FORTY-NINE YEARS

J. M. CLAYTON CO.

CONTRACTING ELECTRICAL ENGINEERS

ATLANTA, GEORGIA

Personal NOTES ABOUT MEN YOU KNOW

mittee of the southeast of the American Public Relations Association.

Dean M. Lewis has been re-elected president of the Silk & Rayon Printers & Dyers Association of America, Inc., for an unprecedented seventh consecutive year.

G. D. Mallory (center), head of textile research for The Goodyear Tire & Rubber Co., and **P. W. Drew** (right), manager of fabric design, are

shown in the accompanying photo receiving from board chairman **P. W. Litchfield** the Litchfield special award of merit gold medals for their efforts in developing the company's triple-tempering process (3-T) for tire cord which made the Goodyear tubeless tire possible.

Now serving as card room overseer in the cotton mill of Crystal Springs Bleachery, Chickamauga, Ga., is **Clyde Norrell** who was formerly associated with The Jefferson Mills, Inc., Jefferson, Ga.

Richard Ralph, formerly manager of a Vermont knitwear finishing plant, is now superintendent of knitwear in Monarch Knitting Co.'s Dunnville, Ont., Canada, plant.

Recently made director of the cotton research project at Textile Research Institute was **Dr. Ludwig Rebenfeld** who has been concerned with research on chemistry of cellulose.

Leslie A. Runton has resigned as director of engineering for Alexander Smith, Inc., to accept the position of president and director of the Russell Manufacturing Co., Inc., Middletown, Conn. **Maurice M. Clairmont** has been elected a member of Russell's board and the executive committee; he is chairman of the board of the Reliance Manufacturing Co., Inc., of New York. **Harvey Weeks,** formerly a di-

SWIFT'S SOAPS

treat fine woolens right!

For fifty years, Swift's soaps have been giving excellent performance when confronted with normal or even unusual fulling and scouring requirements.

Where long fulling cycles are required to obtain the dense, felted finish . . . the soft hand . . . and long wearing qualities that spell superiority, Swift's soaps can spell performance and economy into the same operation by giving excellent sudsing with maximum mileage.

There's a Swift soap for the textile finishing job regardless of temperature; or for use wherever fine dyeing calls for complete, yet gentle scouring. There's one for *your* particular set of requirements . . . one to give sure, skilled and experienced service — where fine woolens need the *right* treatment.

Write for details today, and remember...

ONE TRIAL IS BETTER THAN A THOUSAND CLAIMS

FOR FAST DELIVERY AND RESOURCEFUL SERVICE

375 Swift's distribution points located throughout the U.S. and Canada can give you immediate delivery on these Swift-quality soap products:

VERTEX FLAKES

●

557 FLAKES

●

WHITE RIBBON FLAKES

●

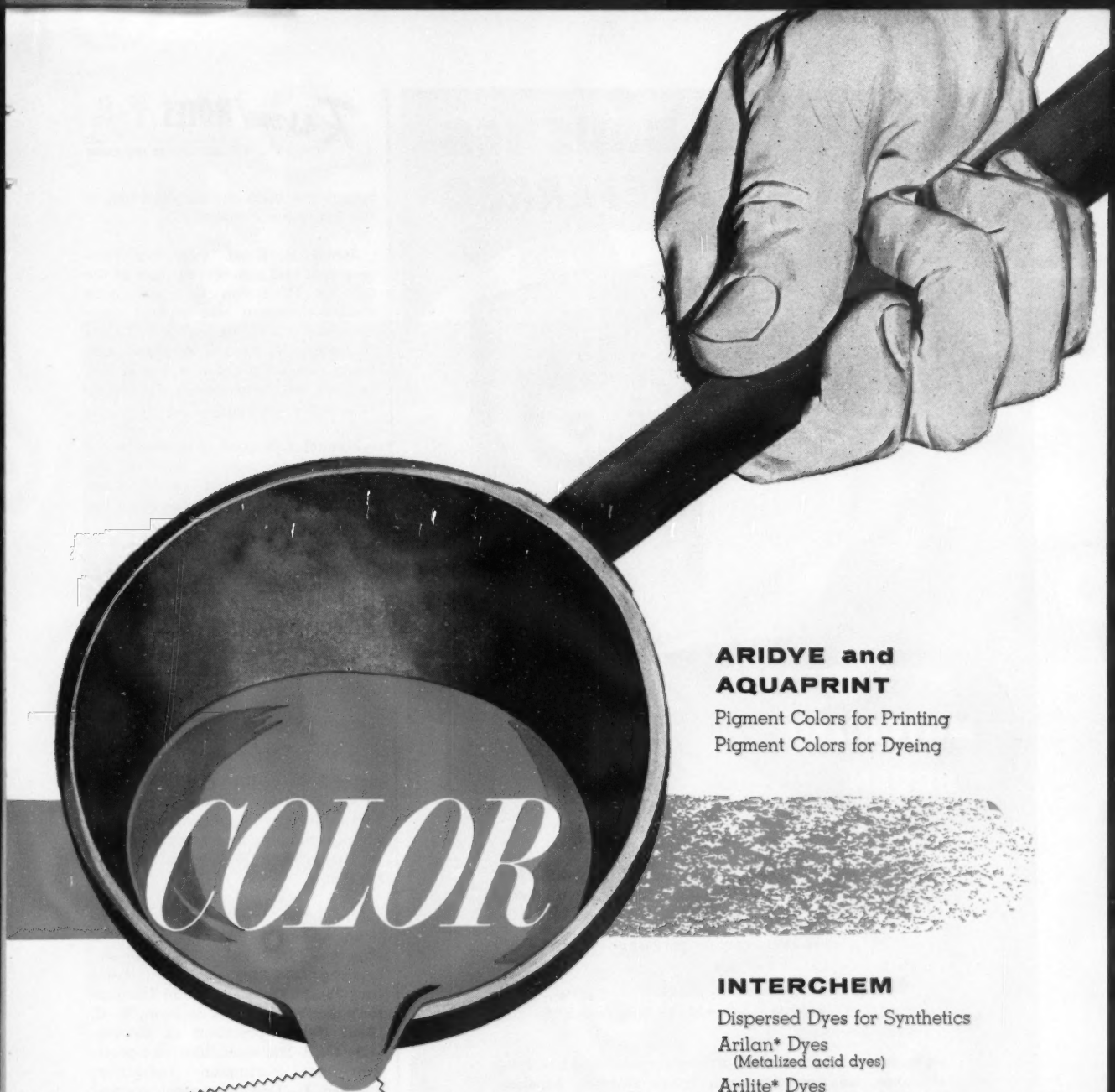
WOOL FLAKES

SWIFT & COMPANY
SOAP DEPARTMENT
4115 PACKERS AVENUE • CHICAGO 9, ILLINOIS

Swift
1855 CENTENNIAL 1955
TO SERVE YOUR INDUSTRY BETTER

Serving the Industry

WITH...



ARIDYE and AQUAPRINT

Pigment Colors for Printing
Pigment Colors for Dyeing

INTERCHEM

Dispersed Dyes for Synthetics

Arilan* Dyes
(Metalized acid dyes)

Arilite* Dyes
(Fast-to-light direct dyes)

Arigen* Powders and Solutions
(Stabilized azoic dyes)

Naphthols and Bases

Selected Direct Dyes

Copper-8 Powder and Dispersions
(Copper-8-Quinolinolate)

Zinc-2 Dispersions

Aridye® COLORS

Aquaprint® COLORS

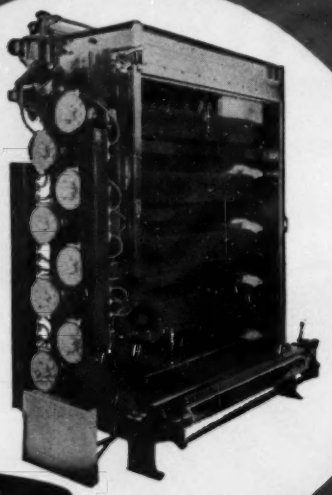
Interchem® Dyes

Interchemical
CORPORATION
Textile Colors Division

Pawtucket, R. I. HAWTHORNE, N. J. Rock Hill, S. C.

*Trade Marks of Interchemical Corporation

METLKOR® BRUSHES PREFERRED



NEW HERMAS MOTORIZED BRUSH

"Most of our customers prefer METLKOR BRUSHES," states the Hermas Machine Co., well-known manufacturer of clothroom equipment, "because:

"—The cores never warp or get out of alignment . . .
"—Bristles don't fall out . . .
"—Rolls are balanced to prevent whipping.
"—All of which is conductive to long brush life and even brushing."

Hermas uses METLKORS in this new motorized brushing machine, as they have in other Hermas brushes, because of their superior performance.

The metal cores, of aluminum, cold drawn steel, stainless steel, copper, or bronze, cannot sag, split, or get out of alignment.

Bristle is wound on the cores by our patented refillable process, firmly held with flat metal wire, and sealed with special baked plastic cement.

*Reg. U. S. Pat. Off.

M. W. JENKINS' SONS, INC.
Over Three-Quarters Century of Pioneering Brushes for Industry
Cedar Grove, Essex County, New Jersey
TELEPHONE Verona 8-5327

Personal NOTES ABOUT MEN YOU KNOW

rector, has been elected chairman of the executive committee.

James R. Scott, executive vice-president and general manager of the Charles H. Bacon Co., has been elected president and general manager, succeeding the late Col. Charles H. Bacon. **W. Vernon Kirkland,** formerly vice-president in charge of production, has been named vice-president of the company.

Manuel J. Rogers, a Greenville, S. C., newspaperman, is now on the staff of the American Cotton Manufacturers Institute with headquarters

Mr. Rogers

at the central office in Charlotte, N. C. Mr. Rogers is devoting the greater part of his time to the field of community relations in the industry and to liaison with Textile Information Service.

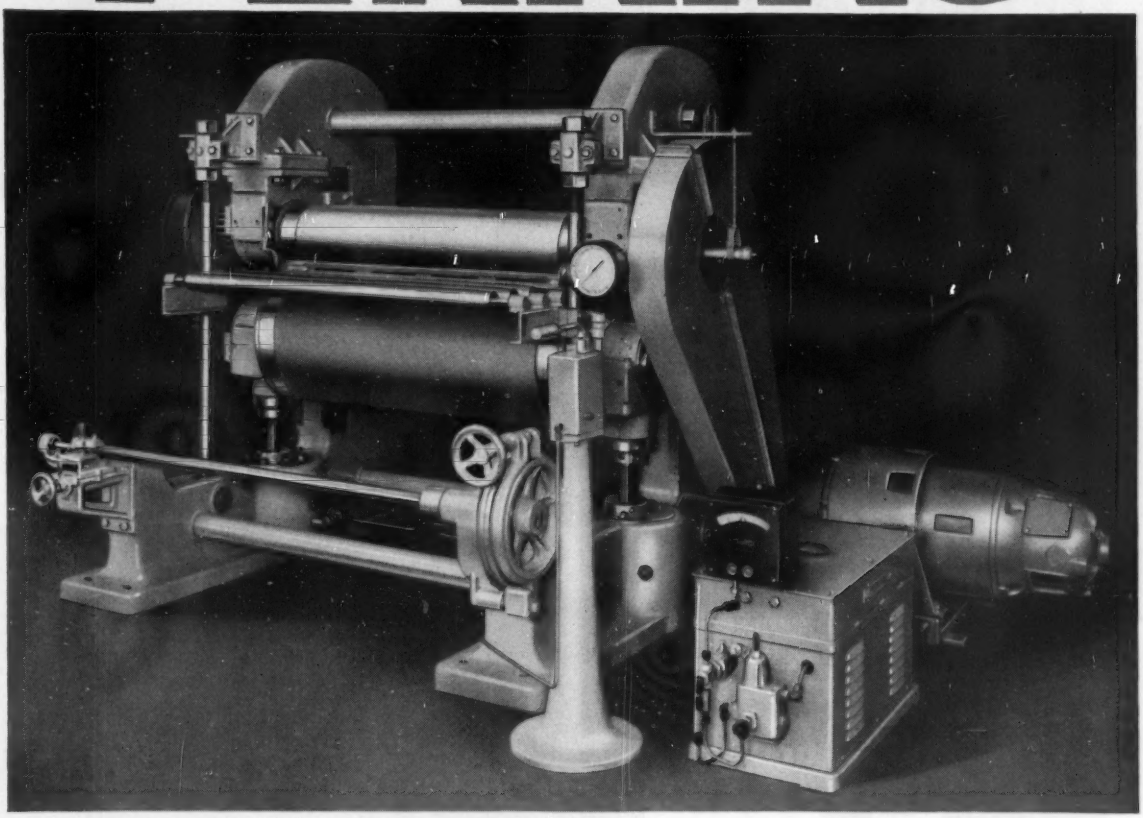
Burlington Industries has five additional members on its board of directors: **Herman D. Ruhm, Jr.,** president of Burlington Industries, Inc.; **Joseph Golden,** head of Burlington's men's wear sales division; **W. C. (Ben) Harris,** president of Mooresville Mills and executive vice-president of Burlington Industries; **Stephen L. Upson,** general counsel and secretary; and **Charles F. Myers,** secretary and treasurer.

Roger D. Smith, who has been in the North Andover, Mass., plant of M. T. Stevens & Sons Co., for a number of years, has resigned to accept the position as superintendent of Slingsby Mfg. Co., Brantford, Ont.

R. H. Tuttle, manager of engineering, research, quality control, and purchasing at Fieldcrest Mills, Inc., Spray, N. C., has been appointed as collaborator of the Agricultural Research Service of the U. S. Department of Agriculture. Mr. Tuttle confers with members of the various sec-

ENGINEERED AND BUILT BY

PERKINS



Another High Production Perkins Calender. This Two-roll Hydraulic Embossing Calender is equipped with plain bearings, top and bottom rolls (can be provided with roller bearings). Gas-heated steel roll — new type Perkins hydraulic power unit with built-in accumulator. Furnished for pressures up to 100 tons maximum pressure.

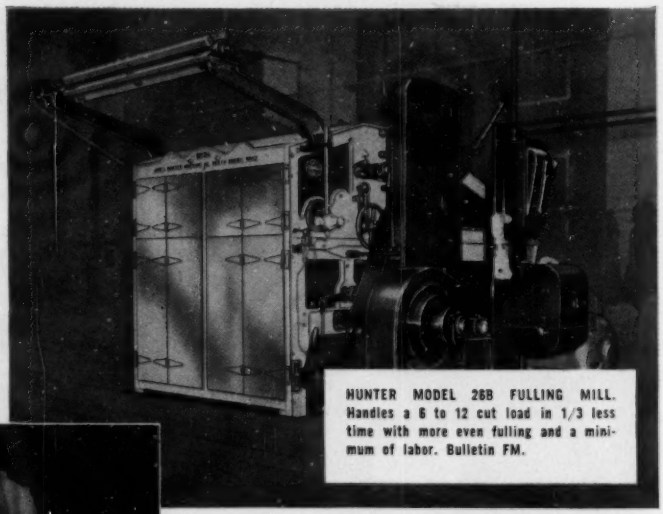
B. F. PERKINS & SON, INC., Holyoke · Massachusetts

Southern Sales Office · 1609 Liberty Life Bldg. · Charlotte · North Carolina

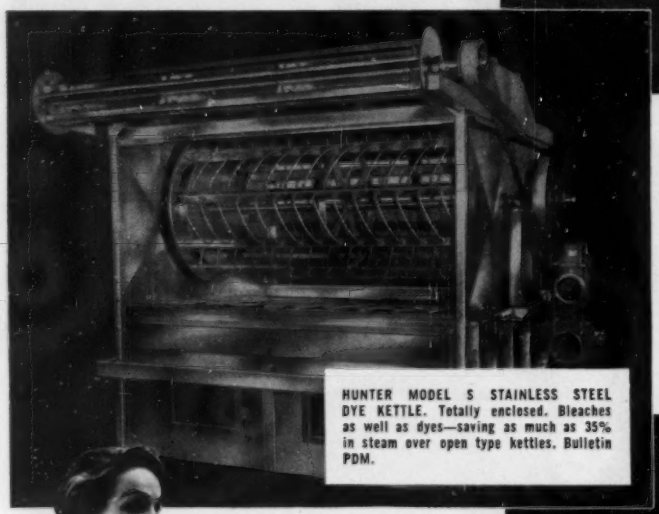
LARGEST MANUFACTURERS OF CALENDER ROLLS IN THE WORLD

HUNTER

Wet Finishing Equipment Is Big In The Profit Picture At LEBANON MILLS



HUNTER MODEL 28B FULLING MILL. Handles a 6 to 12 cut load in 1/3 less time with more even fulling and a minimum of labor. Bulletin FM.

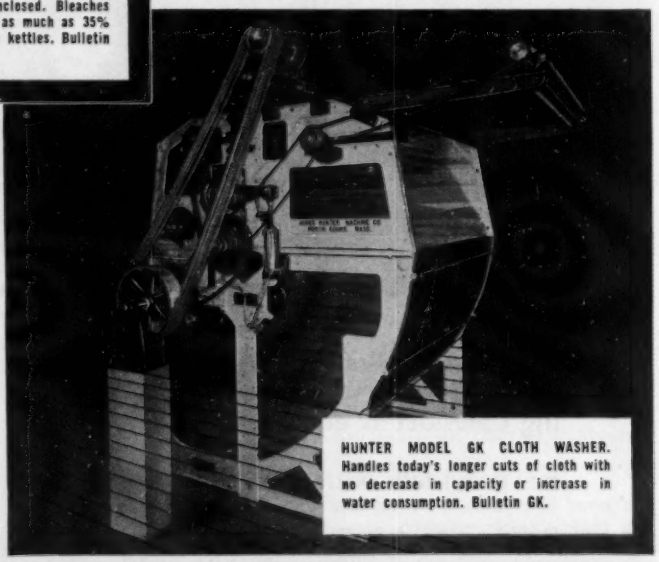


HUNTER MODEL S STAINLESS STEEL DYE KETTLE. Totally enclosed. Bleaches as well as dyes—saving as much as 35% in steam over open type kettles. Bulletin PDM.

For Wool, Cotton, Blends And ALL Synthetics...

Hunter Wet Finishing Machines, at Lebanon and leading mills everywhere, are proving their importance in the modern textile plant's economy. Counterbalancing mounting labor and materials costs, their speed, efficiency and quality output actually make bigger profit margins possible.

HUNTER IS IN THE PROFIT PICTURE WITH A COMPLETE LINE OF DRYING AND FINISHING EQUIPMENT FOR *EVERY* FABRIC REQUIREMENT!



HUNTER MODEL GK CLOTH WASHER. Handles today's longer cuts of cloth with no decrease in capacity or increase in water consumption. Bulletin GK.

JAMES HUNTER MACHINE COMPANY

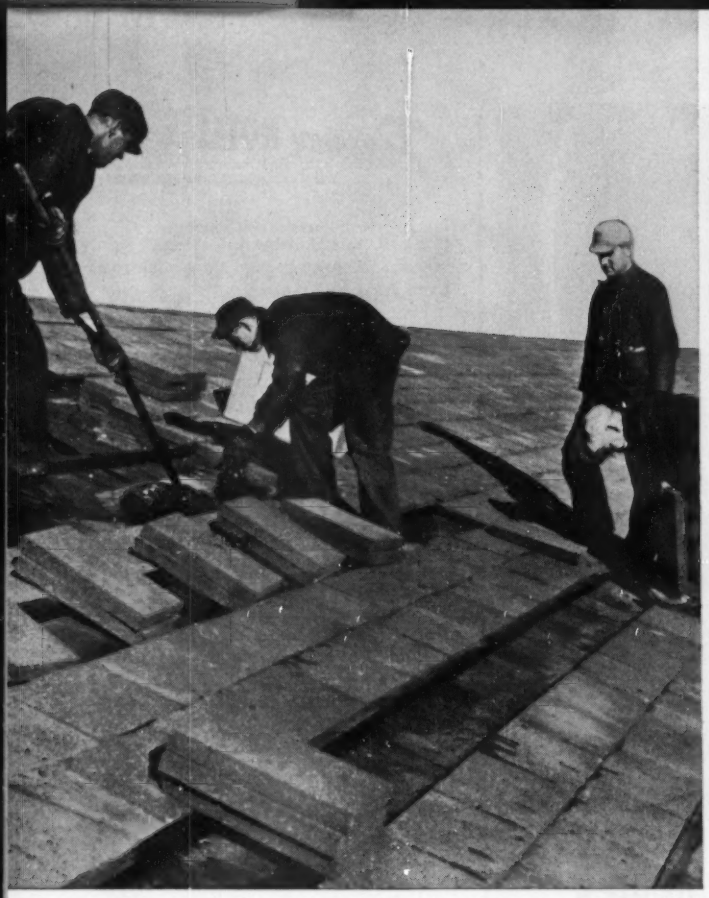
BUILT BY HUNTER ...IT'S DEPENDABLE

JAMES HUNTER MACHINE CO. Hunter NORTH ADAMS, MASS.

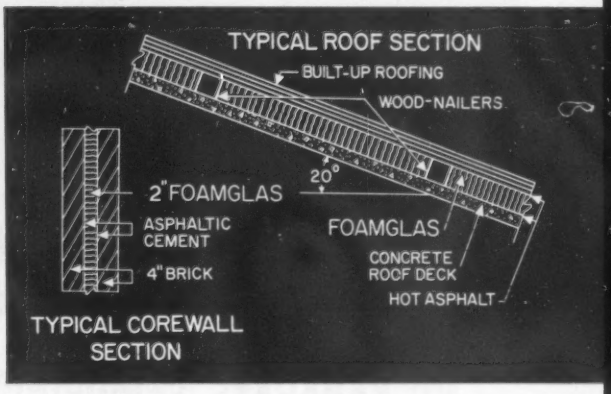
NORTH ADAMS, MASSACHUSETTS FOUNDED 1847

plus production

- efficient operation of modern equipment
- less down time of equipment
- quick, easy repair...rapid parts delivery



At left, FOAMGLAS was embedded in hot bitumen between wood nailing strips anchored to concrete deck. Roofing felts were laid parallel with roof slope. Above, workman applies FOAMGLAS with mastic to exterior wall in corewall construction at Augusta mill.



Bates Manufacturing Company, Lewiston, Maine, reports

"We've used and re-used FOAMGLAS because it stays dry for dependable insulating performance"

"We discovered in 1944 that the organic insulation then in place on sawtooth roof monitors at our Lewiston, Maine, mill had failed," reports Bates Manufacturing Company. "Moisture absorption had destroyed its insulating efficiency. We replaced the old insulation with FOAMGLAS because its sealed glass cells are waterproof. We knew insulation that stays dry could be depended on for long-lasting insulating performance. We have had no moisture absorption problem since then . . . and insulation maintenance and replacement have been virtually eliminated. We discovered, too, that the light weight and high strength of FOAMGLAS made it easy for us to secure a satisfactory application on the sloping roof monitors."

Bates' report continues: "Because of its excellent seven-year performance record at Lewiston, FOAMGLAS was used again in 1951 to insulate core walls of a new weave room at our Edwards Division mill in Augusta, Maine. Here again, dependable insulating efficiency was most important . . . to help us maintain constant temperature (70°) and humidity (65%) in the weave room. In a climate where winter temperatures often remain at 10° F., we depend on the sealed cells of FOAMGLAS to guard us against damaging insulation failure."

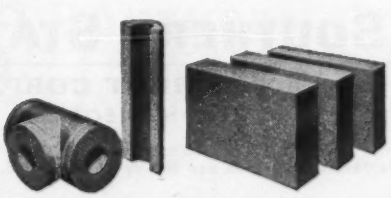
Why not follow the lead of Bates and other leaders in the textile industry? Take advantage of the many benefits you'll get when you insulate with FOAMGLAS, the strong, rigid insulation that stays dry, is fireproof and acid-proof. Send today for a sample and our detailed booklet describing the use of FOAMGLAS to insulate roofs, walls, ceilings and floors.

PITTSBURGH CORNING CORPORATION

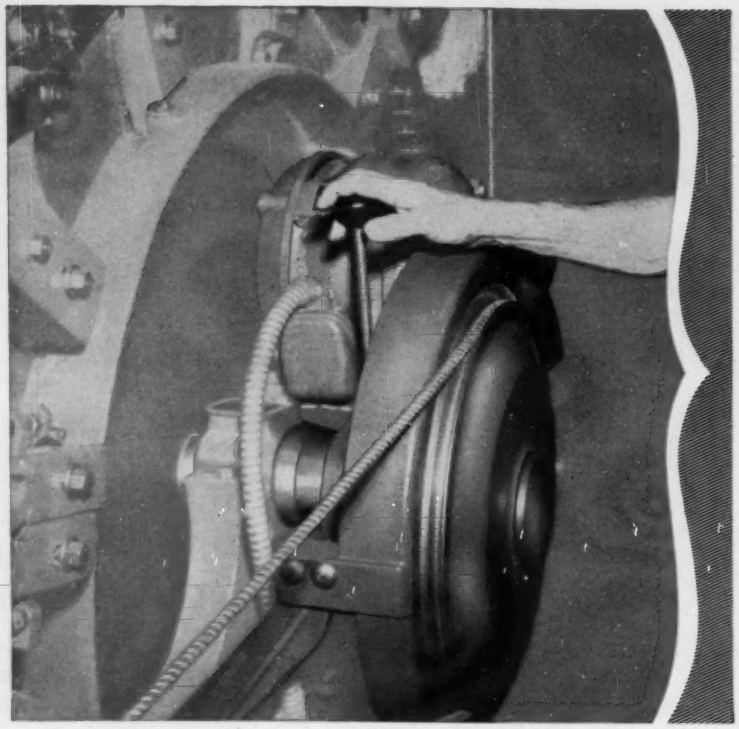
Dept. AG-95, One Gateway Center • Pittsburgh 22, Pa.

FOAMGLAS®

the cellular, stay-dry insulation



Pittsburgh Corning also makes PC Glass Blocks



NO SEPARATE STRIPPING DEVICE OR CHANGES IN PROCEDURE WITH SOUTHERN STATES CARD DRIVES

There is no need to run the risk of costly accidents as a result of changes in operating methods when you install individual card drives in your mill. Southern States has eliminated that problem.

An exclusive feature—a standard-diameter, grooved pulley, built on the main drive—permits stripping in the usual manner. In every case where Southern States Individual Card Drives are used, mills report that stripping is simpler, quicker and safer.

The Southern States Card Drive is priced low enough to fully justify the elimination of old-fashioned lineshafting and belting with their well-known headaches. It is a packaged unit, quickly and easily installed. Mounts directly to card frame. No complicated reduction unit or overhung load on cylinder shaft. Occupies about the same space as a flat-belt drive. Leaves the flats clear and eliminates the danger of springing arches or damage to flats as a result of vibration.

Every month increasing numbers of Southern States Individual Card Drives are going into service. Let our representative show you how they can be made profitable for your mill.

SOUTHERN STATES
EQUIPMENT CORP.
HAMPTON, GEORGIA

Personal NOTES ABOUT MEN YOU KNOW

tions at the Southern Regional Research Laboratory in New Orleans from time to time.

William F. Patrick, formerly with Wm. Skinner & Sons, Holyoke, Mass., and Belding-Heminway, Morristown, Tenn., is now superintendent of the nylon department, Henry Myer Thread Co., Chicago.

Resignation of **Young M. Smith** as public relations man and purchasing agent for Shuford Mills, Inc., Hickory, N. C., has been announced. Connected with the mills since 1943, Mr. Smith plans to resume private law practice in Hickory, but remain as general counsel for the firm.

Robert T. Stevens, former chairman of the board of J. P. Stevens & Co., Inc., recently resigned as Secretary of the Army and has since been elected president, director, and member of the executive committee of the Stevens organization.

Recently appointed to head the department of education of The Wool Bureau, Inc., was **Miss Thelma Thompson,** a former assistant professor in home economics at Ohio Wesleyan University. Miss Thompson succeeds **Mrs. Dorothy Burgess** who has resigned.

After more than twenty-one years of service as superintendent of Shelby (N. C.) Cotton Mills, **J. O. Williams** has retired. Mr. Williams was guest of honor at a barbecue, on which occasion he received gifts from the company and his fellow employees.

"Citizen of the Year" for 1954-1955 in Clinton, S. C., is **Robert M. Vance,** vice-president of Clinton and Lydia Cotton Mills in Clinton, S. C.

Recently elected assistant secretary of Washington Mills Company, Winston-Salem, N. C., was **Robert H. Vaughn,** who joined the organization in 1942.

Otis Vowell was recently promoted to second hand on the third shift in the Synthetic Unit of the Unity Spinning Plant of Callaway Mills Company, LaGrange, Ga.

The North Carolina State College School of Textiles' chapter of Phi Psi, national honorary textile fraternity,

has presented its 1955 "Man of the Year" award to **Harold W. Whitcomb,** president and director of Fieldcrest Mills, Inc., Spray, N. C.

Dr. Helmut Wakeham has been appointed director of research of Textile Research Institute. **Dr. Howard J. White, Jr.,** associate director of research, has been assigned responsibility for the Institute's educational program which is carried out jointly with Princeton University.

L. M. Woodward, general manager of Eastman (Ga.) Cotton Mills, recently won a new automobile and a $1,000 U. S. Savings Bond in a nationwide contest which required contestants to ride in demonstrators and submit brief statements on why they would like to own a new car of that particular make.

A former vice-president of Saco-Lowell Shops, **James L. Truslow,** is now associated with the West Point (Ga.) Manufacturing Co. as foreign representative. It is understood that Mr. Truslow is working out of the Boston, Mass., office of West Point.

J. P. Toms, master mechanic at Clinton (S. C.) Cotton Mills, since 1946, retired on June 1. **Posey Taylor,** formerly with the Slater Division of J. P. Stevens & Co., Inc., is his successor.

Obituaries

Charles H. Bacon, 78, president of Charles H. Bacon Co.

George A. Cluett, 82, retired president of Cluett, Peabody & Co.

Alex S. Hanes, Jr., 42, director of several textile and other manufacturing plants in North Carolina.

Franklin W. Hobbs, 86, retired chairman of the board of Arlington Mills.

Clarence W. Horr, president of Minot Hooper & Co., Inc.

Roscoe C. Hulbert, 63, president of Caroir Silk, Inc.

Samuel R. Kotzen, 50, president of Howard C. Mohn Hosiery Co.

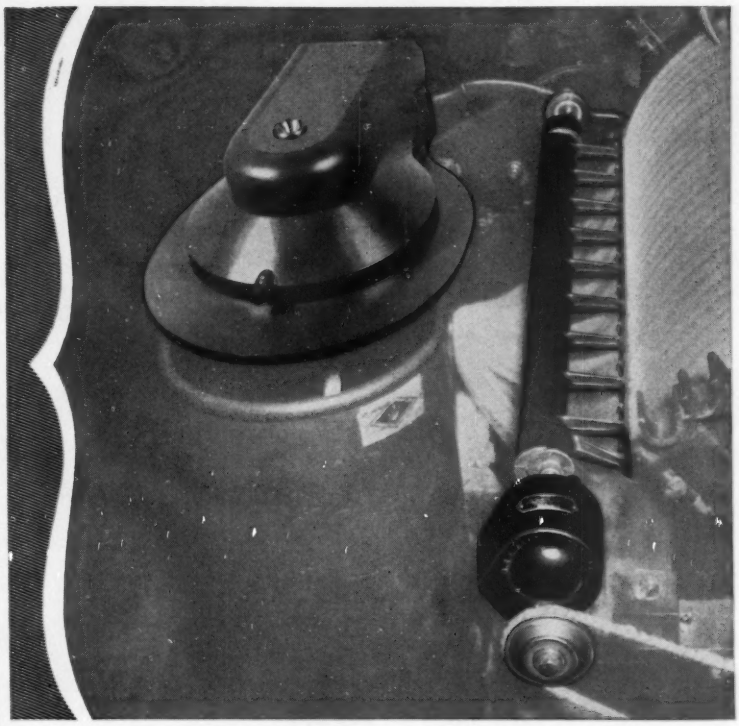
Robert H. Patchin, 74, retired vice-president of W. R. Grace & Co.

P. A. Redmond, Sr., 72, president of Alabama Mills, Birmingham, Ala.

J. C. Self, president, Greenwood Mills, Grenwood, S. C.

Howard L. West, 45, superintendent of manufacturing operations at Wamsutta Mills.

John T. Wild, 85, retired textile designer and engineer for Whitin Machine Works.



SOUTHERN STATES NOW OFFERS A FOUR-WAY COMBINATION TO BETTER CARDING OPERATIONS

No mill need put up with hot, leaky, rattling comb boxes, hard-to-align comb blades with distorted fingers, out-dated off end bearings, or antiquated coilers with small cans. Not when Southern States has a four-way answer to all of those problems and at prices every mill can afford!

One. Ball-bearing, sealed-for-life Comb Boxes that operate smoothly, quietly and never run hot.

Two. New Aluminum Comb Stock with solid blade support. Light in weight, yet more rugged than conventional steel. End journals of steel simplify balancing and assure long life. True alignment is easy. No distortion between fingers.

Three. Vibrationless Off End Stand. Pre-lubricated sealed bearing eliminates oiling. Mounts either right or left hand.

Four. Universal Coiler Head for 14- or 15-inch cans for use on any make coiler. Simplified design. Cut tooth gears and oilite bearings throughout.

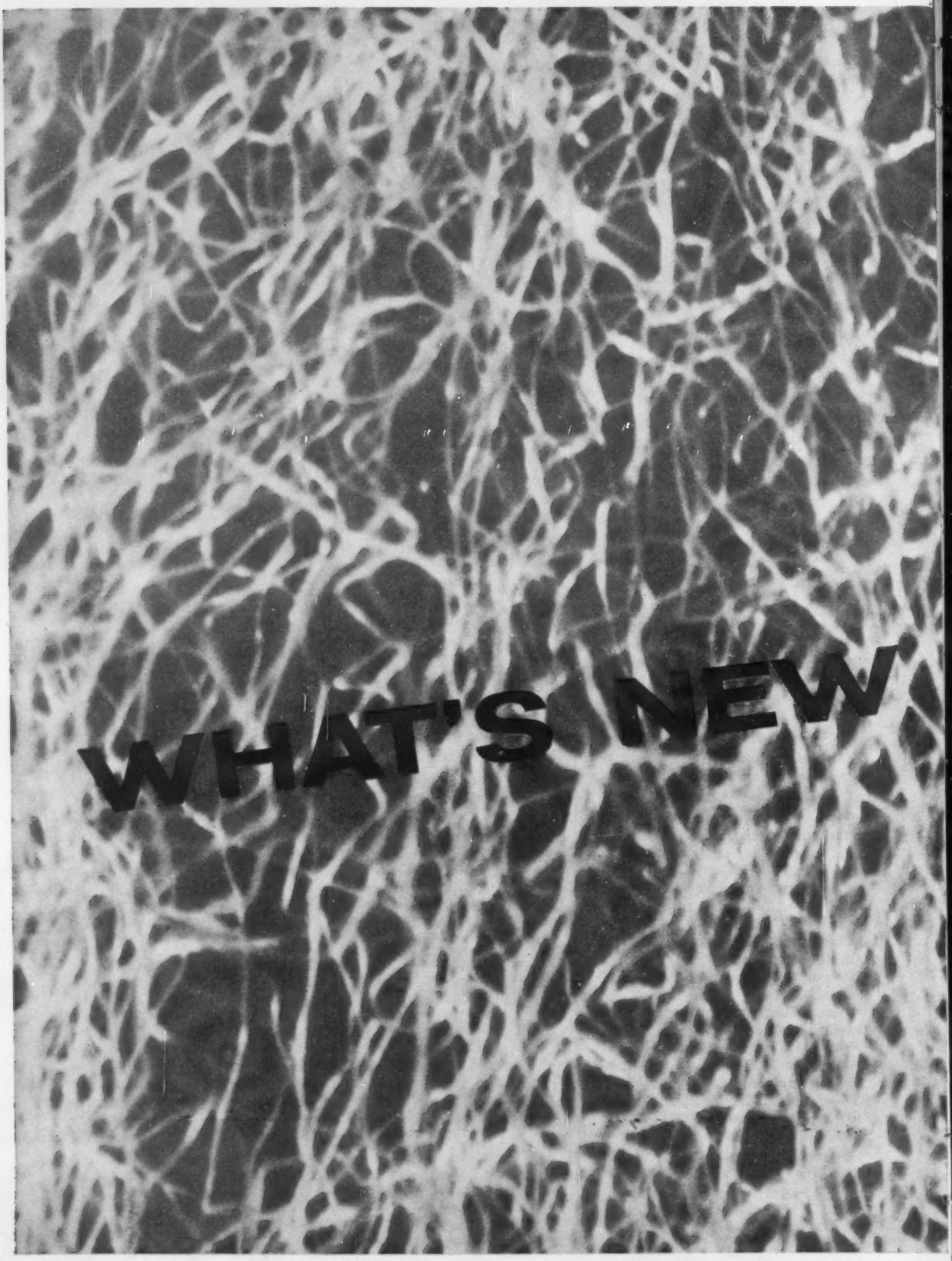
These Southern States units will bring vastly improved carding operations to your mill and cut operating costs. Facts and figures, based on case histories, will prove how they pay for themselves in record-short time. Let our representative give you the details, or write us direct.

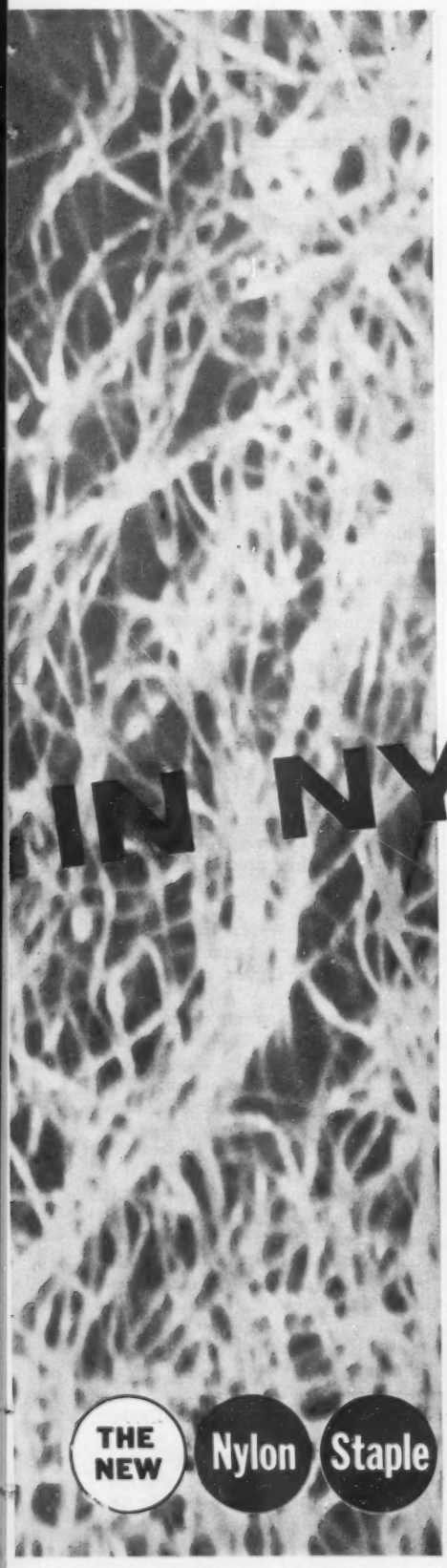
SS

SOUTHERN STATES

EQUIPMENT CORP.

HAMPTON, GEORGIA


WHAT'S NEW



For the first time, an entirely new kind of nylon is on the market. Aptly named the NEW Nylon Staple, IRC feels it is a better nylon staple. For these reasons. The NEW Nylon Staple brings to industry seven new and distinctive features in nylon capable of producing completely new and better effects.

BRIGHTER LUSTER • BETTER CRIMP
MORE RESILIENCY WITH LESS CRUSHABILITY
LOWER DYE COSTS • GREATER STRENGTH
GREATER RESISTANCE TO ABRASION
NEW ECONOMY FOR YOU

Already in production-line use in several major industries, in the "pilot" stage in others, in the planning stage in still more, the NEW Nylon Staple is being counted on to put new life in products and bring new products to life.

I·R·C Industrial Rayon Corporation

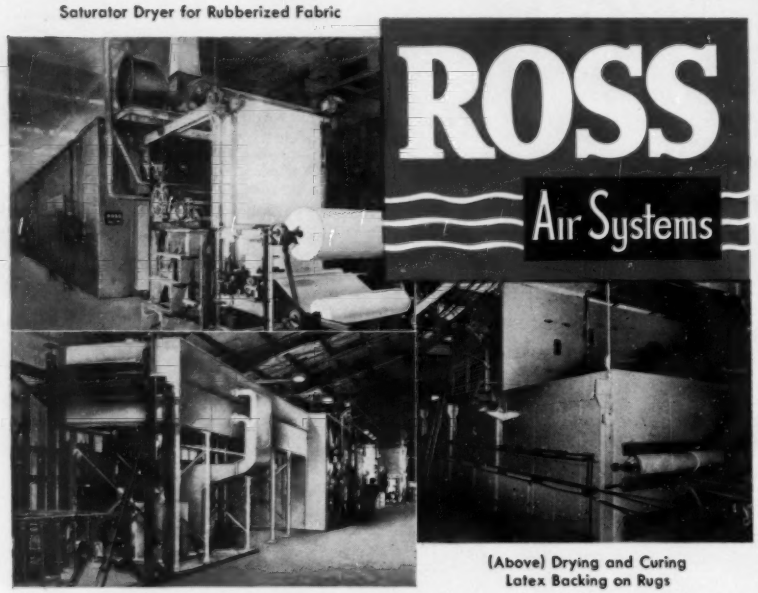
Sales Offices: 500 Fifth Avenue, New York 36, N. Y. • 627 Guilford Building, Greensboro, N. C.

IF YOUR AIM IS TOWARD

Diversification

you will profit by considering the varied line of

Saturator Dryer for Rubberized Fabric



Drying and Fusing Plastic Coated Fabrics

(Above) Drying and Curing Latex Backing on Rugs

here are some products processed with ROSS Systems

Printed fabric and grey cloth . . . mercerized cotton, yarn, nylon and rayon slivers . . . preshrunk suiting cloth . . . impregnated fabrics, laminated plastics, tire cord . . . artificial leather, shower curtains, raincoats . . . tufted rugs . . . flocked cloth . . . masking and adhesive tape . . . and similar products.

Benefit from our 34 years' experience and our unequalled research and testing facilities. Write for copy of our AIR SYSTEMS FOR TEXTILES BULLETIN or visit our nearest office.

J. O. ROSS ENGINEERING CORPORATION

ATLANTA, GA.—3182 Peachtree Road, N.E. BOSTON, MASS.—79 Milk Street
CHICAGO, ILL.—201 North Wells Street NEW YORK, N. Y.—444 Madison Avenue
Detroit Los Angeles Seattle

What the TEXTILE MILLS *are doing*

The five Anderson, S. C., mills owned by Textron American, Inc.,—the Toxaway, Ladlassie, Riverside, Southside, and Gossett plants—are now being operated under a lease arrangement with option to purchase by **The Abney Mills,** Greenwood, S. C. Cotton and spun rayon fabrics are produced in these plants which have a total of approximately 75,000 spindles and 1,600 looms and utilize approximately 1,600 operatives.

Spanish imports were introduced last summer by **Adler Co.,** Cincinnati, Ohio. According to the announcement, this is the first time the 90-year-old hosiery and stockinette manufacturer has reached across the sea for merchandise to be sold under the Adler name. The imports—arglye socks for men and knee-length socks for women—are reported to be made on hand-operated machines by one of the largest hosiery mills in Spain.

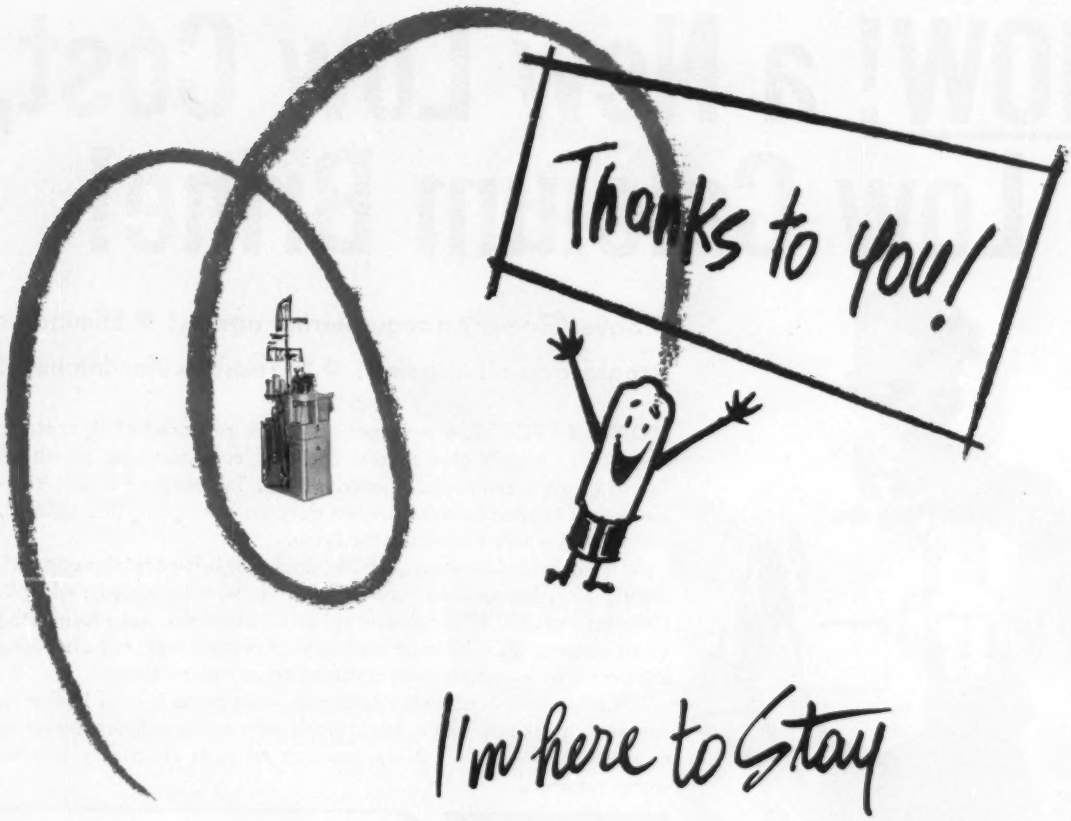
The new name of the **John Alden Woolen Mills, Inc.,** Farnumsville, Mass., is **J. J. O'Donnell Woolens, Inc.** Mr. O'Donnell is president and selling agent.

Boaglin Lace Works, Inc., is a new lace manufacturing plant on Route 119 in Coventry Center, R. I.

A recent fire severely damaged the plant and equipment of **Cantex Manufacturing Co.,** Canton, Ga. According to Turner Jones, president of the wet processing plant, several thousand yards of corduroy were destroyed.

A textile finishing plant, cost of which is estimated at $5,000,000, will be constructed at Carlisle, near Union, S. C., by **Cone Mills Corp.** of Greensboro, N. C., a recent announcement indicated. When the plant is completed and all equipment placed in operation, about 700 operatives will be employed.

Powdrell & Alexander, Inc., Danielson, Conn., has disposed of the corporation's last textile property—the finishing plant in Danielson. A new concern, **Danielson Finishing Co.,** has been organized with George H. Jackson, formerly a Powdrell &



I'm here to Stay

It was a long, hard pull . . . but now I've *really* arrived! Today, I'm the "brain cell" in the most revolutionary knitting machine to be developed in the last thirty-five years . . . a machine that mass produces 400 needle seam-free stockings at the push of a button!

The secrets of my success? The miracle of electronics . . . and your enthusiastic interest in the Fidelity 400 circular knitter.

THE FIDELITY 400 has already set new standards for high-speed production in many mills . . . new highs in profits, too, from the superior quality seamless ladies' stockings it produces. Orders for new and additional units prove that the years spent in research and development have resulted in a machine the hosiery industry recognizes to be outstanding.

The Fidelity 400 is a success . . . I'm a success . . . thanks to you.

We appreciate your faith in the Fidelity 400. It guarantees an ever-increasing production schedule to meet your demand.

Designers and Builders of Intricate, Automatic Precision Machines

SINCE 1911

FIDELITY MACHINE COMPANY, INC.

3908-18 FRANKFORD AVENUE, PHILADELPHIA 24, PA.

EXPORT DEPT.: 25 BEAVER STREET, NEW YORK 4, N. Y.

NOW! a New Low Cost, Low Calcium Brine!

Available in Bags and Bulk

● Saves money on sequestering agents! ● Eliminates streaks and off-shading! ● Increases color intensity!

MORTON "PCB" is a new, patented rock salt product. It contains southern rock salt, plus special chemical compounds in pelletized form to give a controlled dissolving rate. The purpose of this combination is to keep harmful calcium deposits from going into solution, and thus eliminate them from the brine.

As the chart below shows, "PCB" Rock Salt brine contains approximately 80% *less calcium* than brine made with untreated rock salt. (The less than 200 PPM calcium in "PCB" brine will not precipitate.) What's more, "PCB" can be used in your present rock salt dissolving equipment without additional construction or extra labor.

"PCB" is specifically recommended when brine is used in dyeing rawstock, package, beam, beck or jig with either sulphur, direct or naphthol dyes. ("PCB" brine also can be used effectively in your water softener.)

ORDINARY ROCK SALT BRINE AVERAGES 800 PPM
PCB ROCK SALT BRINE AVERAGES 200 PPM

PPM Calcium in Brine

Brine made from ordinary rock salt contains approximately 4 times more calcium than brine made with new "PCB".

"PCB" Brine

• Improves crock fastness with naphthol dyes • Increases color intensity where sulphur dyes are used • Results in softer finishes, more even shades • Saves money on sequestering agents • Aids in retarding corrosion • Is far less expensive than brine produced from purified low calcium evaporated salt.

FREE! Let a Morton Brine Engineer take a sample of your brine. He'll have it analyzed in Morton's laboratory and tell you how much you can reduce the calcium content by using "PCB" Salt.

MORTON SALT COMPANY
Industrial Division, Dept. TI-9
120 S. LaSalle Street, Chicago, Illinois

☐ Please send me your free booklet on "PCB."
☐ I would also like a Morton Brine Engineer to make an analysis of the brine in my plant.

Name_____
Title_____
Company_____
Address_____
City_____ State_____

for

"dyed in the wool"

sales appeal

NATIONAL®

FAST LIGHT YELLOW 2GML

When you need the combination of excellent light fastness and better-than-average wet fastness in a level-dyeing acid yellow, we commend National Fast Light Yellow 2GML.

This very soluble National Dye produces moderately bright shades of clear yellow with excellent fastness to light and very good fastness to water, sea water and perspiration. It is particularly useful for carpet and sweater yarns.

Get in touch with our nearest office for a copy of Bulletin No. 404 giving complete properties of National Fast Light Yellow 2GML and for working samples and prices.

NATIONAL ANILINE DIVISION

ALLIED CHEMICAL & DYE CORPORATION

40 RECTOR STREET, NEW YORK 6, N. Y.

Boston Providence Philadelphia Chicago San Francisco
Portland, Ore. Greensboro Charlotte Richmond Atlanta
Los Angeles Columbus, Ga. New Orleans Chattanooga Toronto

Allied Chemical

450 feet

High Quality Drawing Sliver

per minute

This report on Ideal High Speed Ball Bearing Drawing* was made by one of America's finest independent testing laboratories.

For speed . . . and for high quality drawing sliver . . . write for full information today.

CARD SLIVER
24.5% (2.6)
(average of 24 cans)

BREAKER DRAWING

120 FT. /MIN.	240 Ft. /MIN.	360 FT. /MIN.	450 FT. /MIN.
17.1% (1.7) (average of 8 cans)	17.2% (1.1) (average of 8 cans)	18.4% (2.5) (average of 8 cans)	21.8% (1.5) (average of 8 cans)

FINISHER DRAWING

120 FT. /MIN.	240 FT. /MIN.	360 FT. /MIN.	450 FT. /MIN.
15.0% (1.9) (average of 12 cans)	16.8% (1.6) (average of 12 cans)	16.2% (1.0) (average of 12 cans)	17.7% (0.6) (average of 12 cans)

ROVING

39.1% (1.3) (average of 12 bobbins)	41.2% (1.8) (average of 12 bobbins)	42.0% (2.9) (average of 12 bobbins)	45.6% (2.2) (average of 12 bobbins)

YARN

30.4/1 (0.8) 103% (2.7) 69.0 lbs. (3.5) BF = 2098 (average of 12 bobbins)	30.5/1 (0.7) 104% (2.0) 66.0 lbs. (2.8) BF = 2013 (average of 12 bobbins)	30.3/1 (0.6) 107% (3.1) 68.0 lbs. (2.6) BF = 2060 (average of 12 bobbins)	30.3/1 (0.8) 107% (2.6) 66.0 lbs. (3.7) BF = 2000 (average of 12 bobbins)

*Patent Nos. 2,610,363; 2,490,544; 2,412,357. Other patents pending.

Ideal Industries, Inc.
Bessemer City, N. C.

STOWE-WOODWARD Maintenance Tips

for better finishing at lower cost

Q. AT WHAT RUBBER THICKNESS SHOULD A ROLL BE RECOVERED?

A. *(Check the answer you think correct . . .)*	
1. ¼"	
2. HALF THE ORIGINAL THICKNESS	
3. VARIES DEPENDING ON DENSITY, OPERATING NIP AND CUSHION	

You'll find the correct answer in these Maintenance Tips

While either answer No. 1 or No. 2 may be right for certain specific rolls, answer No. 3 is correct. A rubber roll is usually manufactured with a thick cover to provide a deep cushion and a wide nip. Obviously, when the rubber cover is ground to a point where it is impossible to maintain the required cushion and nip, the roll must be recovered.

Stowe-Woodward rubber coverings are bonded to the cores so as to provide a greater thickness of working rubber.

Your Stowe-Woodward sales engineer will be glad to advise you on any problem regarding the care, selection or use of rubber covered rolls . . . and he can tell you the safe minimum thickness for any roll in your plant. When in doubt, ask him.

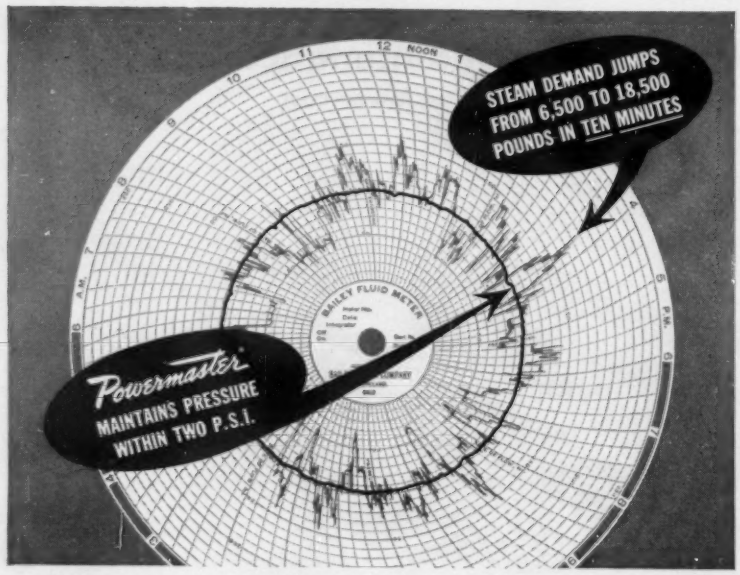
"RUBBER ROLLS with a REPUTATION"

S-W INC.

STOWE-WOODWARD, Inc.

Craftsmen in rubber rolls

NEENAH, WISCONSIN • NEWTON 64, MASS. • GRIFFIN, GEORGIA


STEAM DEMAND JUMPS FROM 6,500 TO 18,500 POUNDS IN TEN MINUTES
Powermaster MAINTAINS PRESSURE WITHIN TWO P.S.I.
BAILEY FLUID METER

Powermasters maintain constant pressure against extreme load swings

• This chart shows a 24-hour run on an installation of two 300 HP *Powermaster* Packaged Automatic Boilers. The load varied from 3,000 lb/hr to about 19,000 lb/hr. This is typical of the widely varying load swings that are encountered in many operations.

The *Powermaster* carries such loads with practically no variation in steam pressures, and continues to operate with full efficiency.

You get MORE than instant response with *Powermaster*

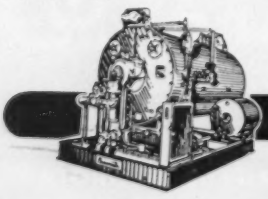
- ★ Low-cost, space-saving installation
- ★ Fast steaming
- ★ Fuel economy
- ★ Quick fuel change-overs
- ★ Clean, dry steam
- ★ Automatic operating and safety controls
- ★ Clean, quiet operation
- ★ Smokeless combustion
- ★ One-source responsibility for complete unit
- ★ Nation-wide factory-trained service organization
- ★ Pay-As-You-SAVE Purchase Plan

Powermaster's outstanding performance can be yours quickly and easily under Orr & Sembower's new Pay-As-You-SAVE Purchase Plan. Write for full details and a copy of Bulletin 1220.

Powermaster®

PACKAGED AUTOMATIC BOILERS

Sizes to 500 HP; pressures to 250 psi.



ORR & SEMBOWER, INC.

Morgantown Road, Reading, Pa.

What the TEXTILE MILLS are doing

Alexander vice-president, as general manager.

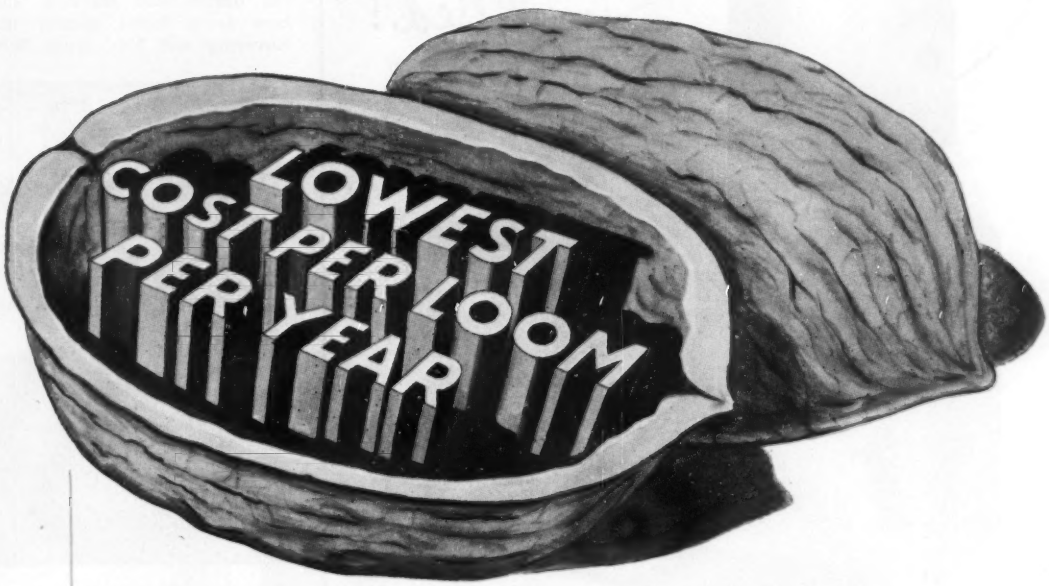
A plant for the manufacture of seamless stockings is to be constructed at Ellijay, Ga., by **Davenport Hosiery Mills, Inc.,** Chattanooga, Tenn., according to reports. It is anticipated that about 150 employees will be required to man the $1,000,000 facility.

Royston (Ga.) Mills, Inc., has been acquired by **Dixie Mercerizing Co.,** Chattanooga, Tenn., and has been designated the Royston Division of Dalton Candlewick, Inc., another Dixie subsidiary. The cotton yarn manufacturing equipment from Dalton Candlewick has been transferred to the Royston plant and is being utilized for the production of cotton tufting yarns. Tufting yarns from man-made fibers are produced in the Dalton plant. J. R. Davison continues as manager at Royston. * * * Dixie's Chattanooga and Lupton City plants have completely revised service recognition plans. While no change was made in the five year club pin now in use, everything else in the program is "brand new." The ten year club ring is a replica of the conventional college ring, with the men's ring carrying a ruby setting and the ladies' ring an onyx. The new type ring is presented to those who complete ten years of service after June 1, 1955. New pins have been designed to recognize 15 and 20 years of service. As in the past, wrist watches are presented upon completion of 25 years of continuous service. * * * The Eugene Hill School of Carding and Spinning graduated a class of sixteen on May 28 in ceremonies held at Lupton City.

Greenville (R. I.) Finishing Co., Inc., has been sold by John W. Shaw to three officers of Associated Dyeing & Printing Co., Inc., of Paterson, N. J. Mr. Shaw continues as manager.

Open weave fabrics made from glass yarns are being produced by **Hess, Goldsmith & Co., Inc.,** for the Carborundum Co. of Niagara Falls, N. Y., to be utilized in the manufacture of abrasive cutting-off wheels. According to the Carborundum Co., the use of this fabric has made it possible to manufacture wheels that have a higher safety factor at operating speeds up to 16,000 surface

THE WHOLE STORY . . .



DENMAN *Pioneered*

THE RUBBERIZED FABRIC PICKER

Through continuous research and picker improvement Denman has always been "first with the best". Watch Denman closely for *new developments* and the latest in *operating efficiency and economy.*

EXCLUSIVE SALES REPRESENTATIVE:

THE Terrell **MACHINE COMPANY, INCORPORATED**

Charlotte North Carolina

Yarn quality Control Simplified!

Brush Imperfection Counter measures and counts neps and other defects automatically

This newest textile instrument by Brush greatly simplifies your quality control—helps you evaluate changes in card production rates, beater speeds, etc. It gives you *facts* to plan for greater production efficiency.

With the Imperfection Counter, you can test any dielectric textile material: cotton, wool, synthetics, fiberglass, plastics. Yarn is automatically checked at the rate of 100 yards per minute. A counter indicates total number of imperfections in a standard length.

This instrument eliminates the human factor in quality checking—saves time and permits exact comparison of mill-to-mill results. For information on this or other Brush Textile Instruments, write Brush Electronics Company, Dept. T-9, 3405 Perkins Avenue, Cleveland 14, Ohio. Southeastern Office: 91 Cleveland St., Greenville, South Carolina. (Phone 5-4079).

BRUSH ELECTRONICS COMPANY

INDUSTRIAL AND RESEARCH INSTRUMENTS
PIEZOELECTRIC MATERIALS • ACOUSTIC DEVICES
MAGNETIC RECORDING EQUIPMENT AND COMPONENTS

BRUSH ELECTRONICS

Division of Clevite Corporation

What the TEXTILE MILLS are doing

feet per minute. Alternate layers of abrasive mix and disks of the glass cloth are molded together under heat and pressure to form the wheels.

Alexander Smith carpet entered the florist field recently. Pictured here is a floral display sent to Governor and Mrs. Hugh White of

Mississippi on the occasion of their 50th wedding anniversary by J. M. Elliott, president of **Alexander Smith, Inc.** This floral piece had a base made of Wilton green carpet with the "50" of gold colored carpet worked into the green background.

An extensive modernization program is under way at **New York (N. Y.) Knitting Mills.** Three 18-gauge full-fashioned outerwear knitting machines have been installed, and the initial production goal is 50 dozen full-fashioned sweaters per week on a one shift basis. Two new Jacquard type circular knitting machines are also on order. In the sewing department several new machines have been installed, including cup seamers for the full-fashioned sweater units. A completely new looping section is being set up near the sewing department.

Quinco Fabrics, Inc., Auburn, Maine, is a new concern organized by Dean Quinton, formerly manager of the Androscoggin Division of Bates Manufacturing Co.

Completion of the million dollar expansion program of **The Schwarzenbach Huber Co.'s** weaving plant in

KEEP IT HOT

you save money at higher temperature with

RAPIDASE®

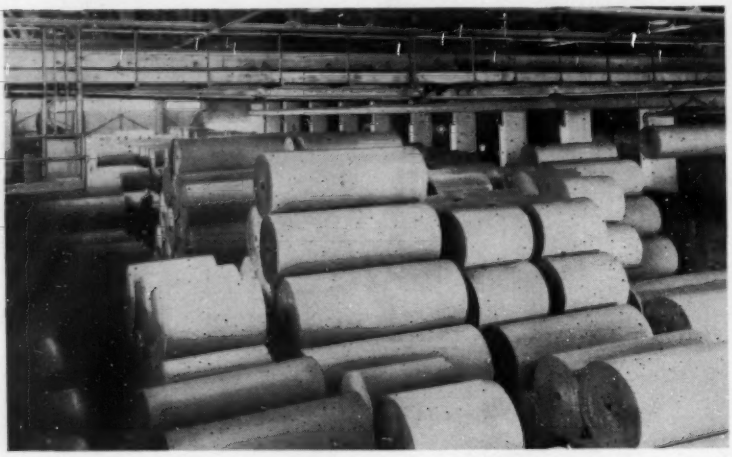
Continuous high temperature de-sizing has been adopted by virtually every large dyer and finisher in the country. The majority of these use RAPIDASE. One reason is that of all enzyme de-sizing preparations, RAPIDASE is most heat resistant and consequently most suitable for the speedier and more economical de-sizing at higher temperature.

WALLERSTEIN COMPANY, INC., 180 MADISON AVENUE, NEW YORK 16, N. Y.

SHEPARD NILES Crane

OVERHEAD PASS

speeds loads there thru-the-air



Put your handling where it belongs

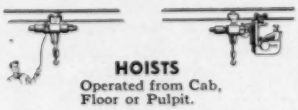
. . . OVERHEAD where it's out of the way! By using a Shepard Niles Crane, you free floor space for production and storage, move loads quickly, safely, at low cost.

Choose from the complete line of cranes which Shepard Niles offers for light, medium or heavy service. Available for constant or intermittent duty in slow, medium and high speeds . . .operated from pulpit, cab or floor. Featuring component parts designed and built by Shepard Niles expressly for crane service.

Write for latest Crane Bulletin . . . and arrange to have a Shepard Niles representative call at your convenience. He'll assist you in selecting the crane that meets your load-handling requirements.

America's Most Complete Line of Cranes and Hoists since 1903

CRANES
Overhead: Top Running, Inner Running Under Running, Floor or Cab Operated.



HOISTS
Operated from Cab, Floor or Pulpit.

SHEPARD NILES
CRANE AND HOIST CORPORATION

1966 Schuyler Ave., Montour Falls, N. Y.

What the TEXTILE MILLS are doing

Altoona, Pa., has been announced. In a dedication ceremony on July 20 the company celebrated 63 years of continuous operation in Altoona. For trade visitors a major feature of the occasion was a tour of the plant while it was in full operation and a display of company products. Facilities of this plant are devoted entirely to the weaving of "solution-dyed" acetates (see article "The Man in the White Suit" T.I. for Jan., 1955, pp. 108-113).

J. P. Stevens & Co., Inc., recently disbursed approximately $1,200,000 in vacation pay to some 14,000 eligible employees in its South Carolina plants. Approximately $200,000 was received by over 2,000 eligible employees of the corporation's plants located in North Carolina.

Textron American, Inc., has made known the fact that all of the company's major activities have now been transferred to wholly-owned subsidiaries. The organization's consolidated textile operations are now carried on by Amerotron Corp. with $50,000,000 capital. * * * The corporation has purchased 100 per cent of the stock of Ryan Industries, Inc., of Detroit, Mich., manufacturers of high precision mechanical and electronic devices, primarily for the armed services. Also, Homelite Corp. of East Port Chester, Conn., manufacturer of chain saws, generators, blowers and pumps, has been acquired. In a report to stockholders, Royal Little, chairman of the board, said "We will continue to push our program of expansion to acquisitions in unrelated fields and still hope to reach our previously established goal of $300,000,000 sales for the year 1956."

A plan to change the charter of **West Point Manufacturing Co.** from Alabama to Georgia has been approved by the board of directors. J. L. Lanier, company president, stated that this change would not affect the operations of the West Point group. "The executive offices of the company are now located in Georgia and we feel that the time has come to put our legal domicile in Georgia for tax reasons and to simplify our corporate structure," Mr. Lanier said.

A new process for imparting flame resistance to nylon nets and tulles has been developed by **World Dyeing and Finishing Co., Inc.,** New York, N. Y. Called Worlderized, it offers the ad-

Help your product "STACK UP" BETTER

Gaylord Boxes

In the warehouse you'll save valuable space because precision-made Gaylord Boxes stack solid, straight...and taller.

In shipment your products will "stack up" better in the eyes of all who see them when they're dressed in eye-catching Gaylord containers.

On arrival your products will "stack up" best; for protection-engineered Gaylord Boxes deliver them in the same good condition in which they left your plant.

Stack the cards in favor of your product. Call your nearby Gaylord sales office today!

CORRUGATED AND SOLID FIBRE BOXES • FOLDING CARTONS • KRAFT PAPER AND SPECIALTIES • KRAFT BAGS AND SACKS

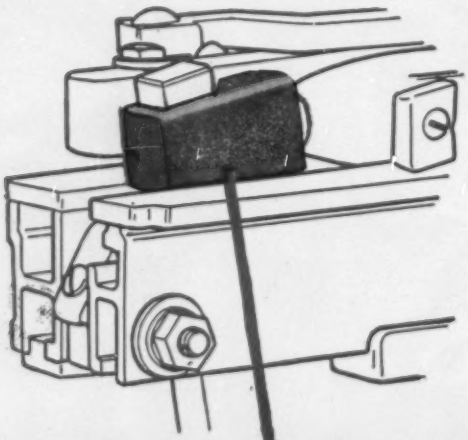
GAYLORD CONTAINER CORPORATION ★ ST. LOUIS

SALES OFFICES FROM COAST TO COAST ★ CONSULT YOUR LOCAL PHONE BOOK

Save a Healthy

on check strap and loop picker costs

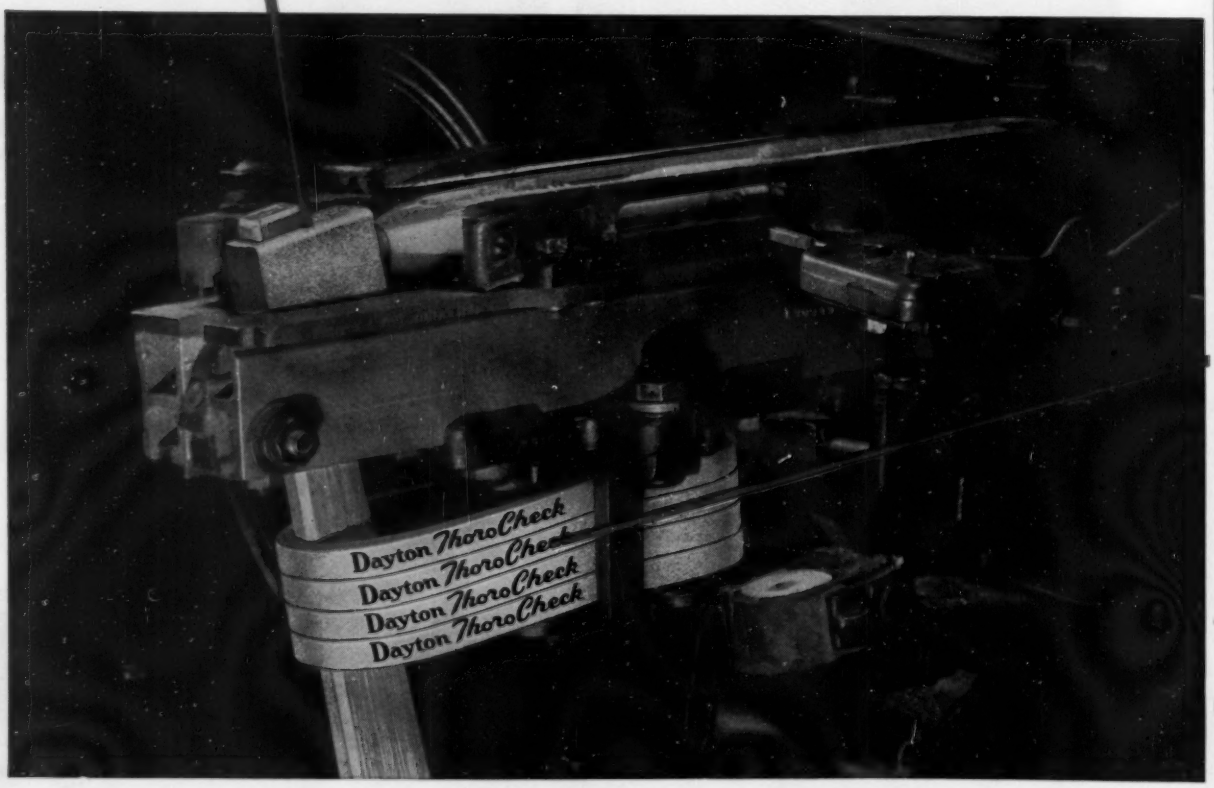
Mill-Proved Dayton Thorobred Loop Pickers and Dayton ThoroCheck Endless Check Straps are performing longer, increasing production and reducing maintenance cost on high speed looms everywhere.



Until you've used Dayton Thorobred Loop Pickers, you've no idea how much more efficient, economical and productive your looms can be. Proof of this is reflected in reports from leading mills . . . "picker costs cut by as much as 50%" . . . "production substantially up" . . . "quality materially improved!"

Made of the highest quality rubber and specially woven fabric, Dayton Pickers have the cushion, strength and durability to withstand the terrific poundings of high speed shuttles for double service life. And they give perfect shuttle contact because the picker stick hole is slightly tilted to insure exact fit on the stick. Daytons keep their shape and jerked-in fillings are practically eliminated.

Too, Dayton Pickers have a flared bottom at the tapered hole for easy, accurate seating on the stick without tearing the loop ply.



25 to 50 Percent

with these Thorobreds by Dayton

Built in one piece, there's nothing to break or expand when Daytons are driven onto the stick.

Dayton's special, precision process of molding fabric and rubber practically eliminates exterior roughness, leaving sides smooth and corners rounded, thus preventing hanging filling and lint pick-up. Daytons are *always* uniform in size and a narrow back eliminates wear on lay end strap.

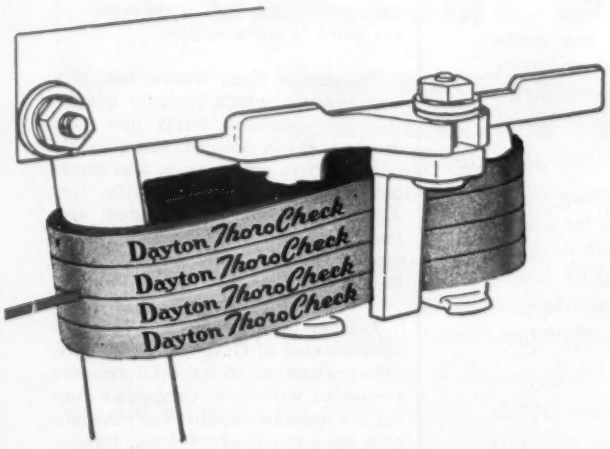
Economy . . . is one *big* reason why more and more mills are equipping their looms with Dayton ThoroCheck Endless Check Straps. They're saving a healthy 25% to 50% in strap costs alone after converting to Daytons—more in time, labor and maintenance! That's because these revolutionary Dayton Endless Check Straps outperform and outlast all other straps in actual mill applications!

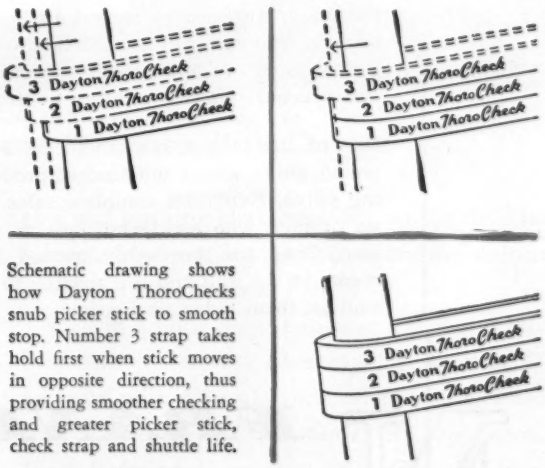
Proof of this: A large southern mill installed them on their X-2 looms. After running Daytons on a 5 day a week, round-the-clock operation for more than 2400 hours, they found no signs of wear and no adjustment was needed . . . and the Daytons are still good for many more months of efficient, economical service. By comparison, other check straps lasted only half as long.

A few of the reasons for such amazing performance are: Dayton ThoroChecks are specially designed and built for safe checking. They eliminate drag over the stick, stop it with a graduated braking action (see diagram), and perform efficiently at the highest speeds.

You get fast, efficient Monday morning starts, too, with Daytons because they're not affected by temperature or humidity. There's no "growing" or elongation, little or no adjustment needed. And, when replacement does become necessary, they may be replaced singly or in sets.

Besides the lower maintenance cost and reduced downtime, you'll get higher production in your weaving operation with Dayton ThoroCheck Endless Check Straps. Make a personal test today. For complete profit-making details write to Dayton Rubber Co., Textile Div., Dept. 366, 40. S. Carolina National Bank Bldg., Greensville, S. C.





Schematic drawing shows how Dayton ThoroChecks snub picker stick to smooth stop. Number 3 strap takes hold first when stick moves in opposite direction, thus providing smoother checking and greater picker stick, check strap and shuttle life.

GOLDEN JUBILEE

Dayton Rubber 50 YEARS OF PROGRESS

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DAYCO AND DAYTON THOROBRED TEXTILE PRODUCTS FOR BETTER SPINNING AND WEAVING

North Leads The Way!

With over half a century of experience, FRANK G. NORTH, INC., leads the way in the manufacture of the greatest possible range of top-notch sizing compounds.

High production and quality weaving are made possible by proper size, correct application and alert service. You can call on NORTH with confidence for all three . . . and for assistance in *all* technical and practical matters relating to size.

One of the largest manufacturers of sizing compound, gums, waxes and kindred products for weaving yarns, NORTH'S complete sales staff is made up of men who are technicians as well as salesmen. They are thoroughly trained in all departments of the mill and are anxious to be of service. Call on them today or anytime.

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MANUFACTURING CHEMISTS

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What the TEXTILE MILLS are doing

vantages of no flaking off of resins, good water repellency, and no excess stiffening of the fabric hand.

Theodore Levy, owner of **Slatedale (Pa.) Knitting Mills,** has announced that operation of the children's hosiery mill is being discontinued "due to personal reasons."

First place winner for the Spinning Mills Division of the 1954 Alabama statewide textile safety contest was the Coosa Plant of **Standard-Coosa-Thatcher Co.** in Piedmont, Ala. The mill had an accident frequency rate during 1954 of 3.21.

Completion of a 52,000 square foot addition to the dyeing and finishing plant in Wallace, South Carolina, for **Delta Finishing Division of J. P. Stevens & Co., Inc.,** has been announced. The one-story, totally enclosed plant addition, reported to cost $186,000, is used for finishing and storing cotton goods for Stevens plants elsewhere in the country.

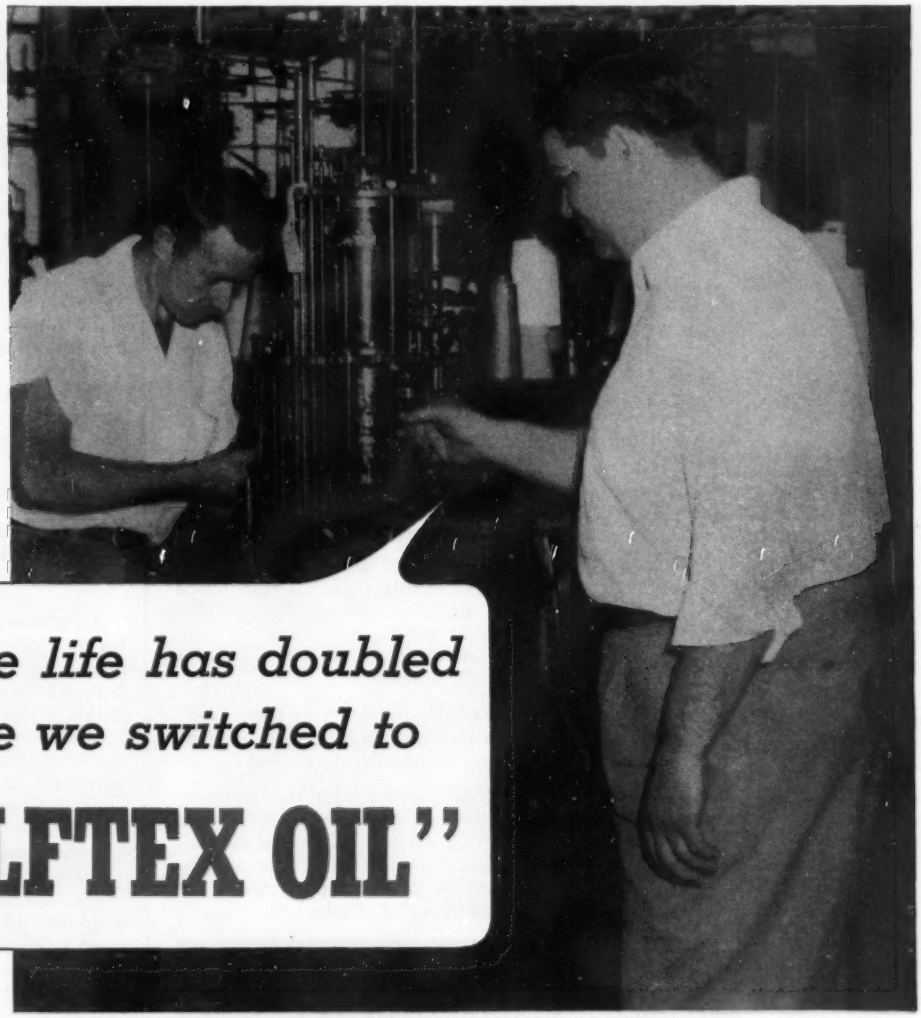
All of the outstanding stock of **Sumner Hosiery Mills,** Gastonia, N. C., has been purchased by Harold Sumner. No change in operation of the plant is contemplated.

Terrybrook Print Works, Inc., is a new concern which recently bought the New England Print and Dye Works plant in Assonet, Mass. Sarkis Diarbekirian, president, is also president of Newbury (S. C.) Mills, Inc. Albert Davidson, vice-president and manager, was formerly with Paramount Printing & Finishing Co. of Pawtucket, R. I.

Textiles-Incorporated and **Threads-Incorporated** of Gastonia, N. C., provide outdoor movies for all families connected with their companies during the summer months. The schedule calls for a movie every week. Admission is free.

Some 7,000 employees and friends of the **Union-Buffalo (S. C.) Mills,** were feted at barbecue dinners during the month of June.

Union (S. C.) Dye & Finishing Works, Inc., has moved into a new and modern building which is designed to receive an abundance of natural light and cross ventilation. Plans have also been made for future



"Needle life has doubled since we switched to GULFTEX OIL"

says Mr. Glenn Powers, Superintendent
Continental Hosiery Company, Henderson, North Carolina

"Not only has needle life been doubled in our knitting machines since we switched to Gulftex Oil in 1953," says Mr. Powers, "but we have also eliminated rust through the use of this excellent oil. Latch needles are much cleaner, sliders are freer, and the machinery lubricated with Gulftex runs noticeably quieter and smoother."

In addition to its qualities which make such important benefits possible, Gulftex Oil has superior non-staining characteristics, so it's the ideal lubricant for any application where the staining of fabrics is a problem.

Call in a Gulf Sales Engineer today and have him demonstrate the advantages of Gulftex Oil in your mill. Consult your telephone directory for your local Gulf Office. Gulf Oil Corporation • Gulf Refining Company, 1822 Gulf Building, Pittsburgh 30, Pennsylvania.

THE FINEST PETROLEUM PRODUCTS FOR ALL YOUR NEEDS

GULF

Early Dyeing establishment: An old Print.

"THOSE DAYS ARE GONE FOREVER"

One look at the conditions under which Early Dyers had to work in the old days should point up how much progress has been made in latter years. The modern dyehouse is the ultimate in functional efficiency . . . like the installation of modern MORTON SYSTEM DYEING MACHINERY shown below.

The MORTON SYSTEM allows the Dyer to process all types of packages and beams with a simple change of material carriers and is automatically controlled.

MORTON MACHINE WORKS pioneered in the development of machinery to dye stock and yarn at temperatures in the 300 degree range. These machines are excellent for use on synthetics. Construction is of any desired grade Stainless Steel and complies with the safety requirements of the A.S.M.E. Code.

THE MORTON SYSTEM DYEING MACHINERY

MORTON

MACHINE WORKS, INC.

COLUMBUS, GEORGIA **U.S.A.**

What the TEXTILE MILLS are doing

expansion. Capacity of the plant will be geared to 12,000 dozen a week, according to J. A. Conrad, president and treasurer. In addition to the dyehouse, preboarding and boarding, stamping, folding and pairing, shipping and receiving departments, the floor of the building is substantially built to hold eight modern 32-section full-fashioned knitting machines.

The National Safety Council's award of honor for industrial accident prevention has been presented to the Stark, Reid, and Asbeston plants of the **United States Rubber Company** in Hogansville, Ga., because of their excellent showing in accident frequency and severity in 1954 as compared with the previous three-year record.

An all-purpose interlining material for the clothing industry has been developed by **The Visking Corp.**, Fabrics Division, North Little Rock, Ark. Called Viskon R. F. (resilient fabric), the non-woven fabric gives garments shape without increasing weight. It is completely crush resistant, may be washed or dry cleaned without any discoloration or shrinkage, and is odorless, porous, and flame resistant.

Vacation pay amounting to almost a quarter of a million dollars was given to eligible employees of **Woodside Mills** in South Carolina before their annual vacation started last month.

Consolidation of offices and personnel is one of the elements of the program now under way at **Texas Textile Mills** to increase efficiency and decrease cost of operations. The engineering, contract, personnel, accounting, and budgeting operations of the general office have been moved to McKinney, Texas, and consolidated with what has heretofore been the division office there. Previously, each mill had operated its office as an independent division; however, each mill office is now operating merely as a branch of the general office.

Underwear, hosiery, and gloves bearing the Van Raalte name will be placed on the European market before the end of the year, according to an announcement. A fifty per cent interest in a new plant now being completed at Casalnuovo, near Naples, Italy, has been purchased by **Van Raalte Co., Inc.**, of New York.

NEUTRAL WOOL SCOURING WITH

LAVEPON WS-1*

FOR

1. **IMPROVED COLOR AND LOFT**
2. **GREATER STAPLE LENGTH**
3. **NO ALKALI DAMAGE**
4. **FASTER DRYING**
5. **HIGHER GREASE RECOVERY**

The LAVEPON WS-1 neutral scouring process has already proven highly successful on millions of pounds of apparel wools, carpet wools, pulled wools, mohair and cashmere—*at costs no more or even less than conventional alkali scours.* Why not investigate its advantages now?

*LAVEPON **WS-1** *is another dependable chemical product for the textile industry made by the makers of* LYKOPON.

LYKOPON and LAVEPON *are trade-marks, Reg. U.S. Pat. Off. and in principal foreign countries.*

CHEMICALS FOR INDUSTRY

ROHM & HAAS COMPANY

WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Representatives in principal foreign countries

SUPPLIERS News

WHAT THEY ARE DOING

Gerald S. Tomkins, formerly vice-president in charge of production, is now president of **American Viscose Corp.** Harry L. Dalton is now vice-chairman of the board, having served as vice-president in charge of sales since 1948. William H. Brown, secretary and treasurer, is now a vice-president and retains the office of treasurer. Succeeding Mr. Brown as secretary is Albert H. Hammond. * * * Formation of three operating divisions, with each to be conducted under a general manager who will report to the president, has been announced. George L. Storm is now a vice-president of the corporation and general manager of the viscose division which includes staple fiber, tire yarn, and viscose filament yarn. Paul E. Hill is general manager of the acetate division which includes acetate and vinyon. Harold J. Michel is general manager of the film division which includes cellophane, viscose bands, casings, and plastics.

The appointment of Robert T. Regan as eastern region manager, bulk corn products department, for **Anheuser-Busch, Inc.,** has been announced. Mr. Regan's office is in New York City.

Ernest Nuber has been promoted to general field sales manager for **The Bristol Company.**

Curtis B. Hoffman is now vice-president-sales of **Brush Electronics Co.** In addition to his administrative duties, Mr. Hoffman is directing the marketing of industrial and research instruments, electronic components, and new electronic memory devices.

Oliver A. Gottschalk, formerly assistant to the president of **The Carborundum Co.,** is now treasurer-controller. George J. Zimmerman, staff assistant for management controls, is assistant to the president.

Election of William Lee Sims II as president of **Colgate-Palmolive Co.** has been announced. Ralph A. Hart was elected vice-president of the company and also named to succeed Mr. Sims as president of Colgate-Palmolive International.

Promotion of five executives of **Commercial Factors Corp.** was announced recently: George J. Schatz, vice-president and director, becomes senior contact officer in the basic textile field; Joseph C. Locastro, assistant vice-president, has been appointed vice-president in charge of the wholesale credit department; Carl T. Erickson, assistant vice-president who had been in charge of woolen and worsted mills in the wholesale credit department, has been appointed contact officer in that field. Harold J. Gerber, assistant secretary becomes assistant vice-president in the wholesale credit department, with the servicing of woolen accounts as one of his major responsibilities; Emil L. Jacubecy, assistant vice-president, assumes administrative responsibilities in the operations department. * * * James A. McMurria is now executive field representative in the southeastern states with headquarters in Columbus, Ga., at 908 Overlook

NON-FLUID OIL

TRADE MARK REGISTERED

STAYS ON ROLL NECKS!

Liquid oils are sometimes cheap to buy—but always costly to use.

They creep or spatter out of spinning frame roll necks. Result: High oil and application cost, plus rotted roll covers and stained yarn. NON-FLUID OIL *stays* in roll necks—lubricates until entirely consumed—hence saves on oil and application expense—prevents rotted roll covers—avoids stained yarn.

7 out of 10 leading mills profit by using NON-FLUID OIL in roll necks. You can do the same.

For positive proof send for free testing sample, no obligation.

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NEW YORK & NEW JERSEY LUBRICANT COMPANY
292 MADISON AVENUE, NEW YORK 17, NEW YORK
Works: Newark, N. J.—Warehouses and representatives in principal industrial centers

Please send me, without obligation, a free testing sample of NON-FLUID OIL.

NAME _____ TITLE _____

FIRM _____

ADDRESS _____

TYPE OF MACHINERY _____

"There goes Si after the final check on that last batch!"

Seriously, all of us at Seydel-Wooley pride ourselves on being sticklers for accuracy.

We're on constant guard to assure you of steady, never-varying quality, regardless of the product involved.

We realize that should our compounds vary, even slightly from batch to batch, that your overall quality could be effected.

So. we check . . check . .check . . check . . check . .

Warp Sizing: *Softeners, Binders, Penetrants, Ty-In Penetrants, Shuttle Dressing, Waxes.*

Wet Processing Chemicals and Auxiliaries: *Dye Assistants, Penetrants, Rewetting Agents, Sanforized Fabric Oils, Detergents, Scouring Agents, Softeners.*

Niagara Twist-Setter: *Yarn Conditioning Penetrants.*

Seyco Warp Lubricator.

Headquarters for textile chemicals

SEYDEL-WOOLLEY & CO.

748 RICE STREET, ATLANTA, GEORGIA

SEYCO

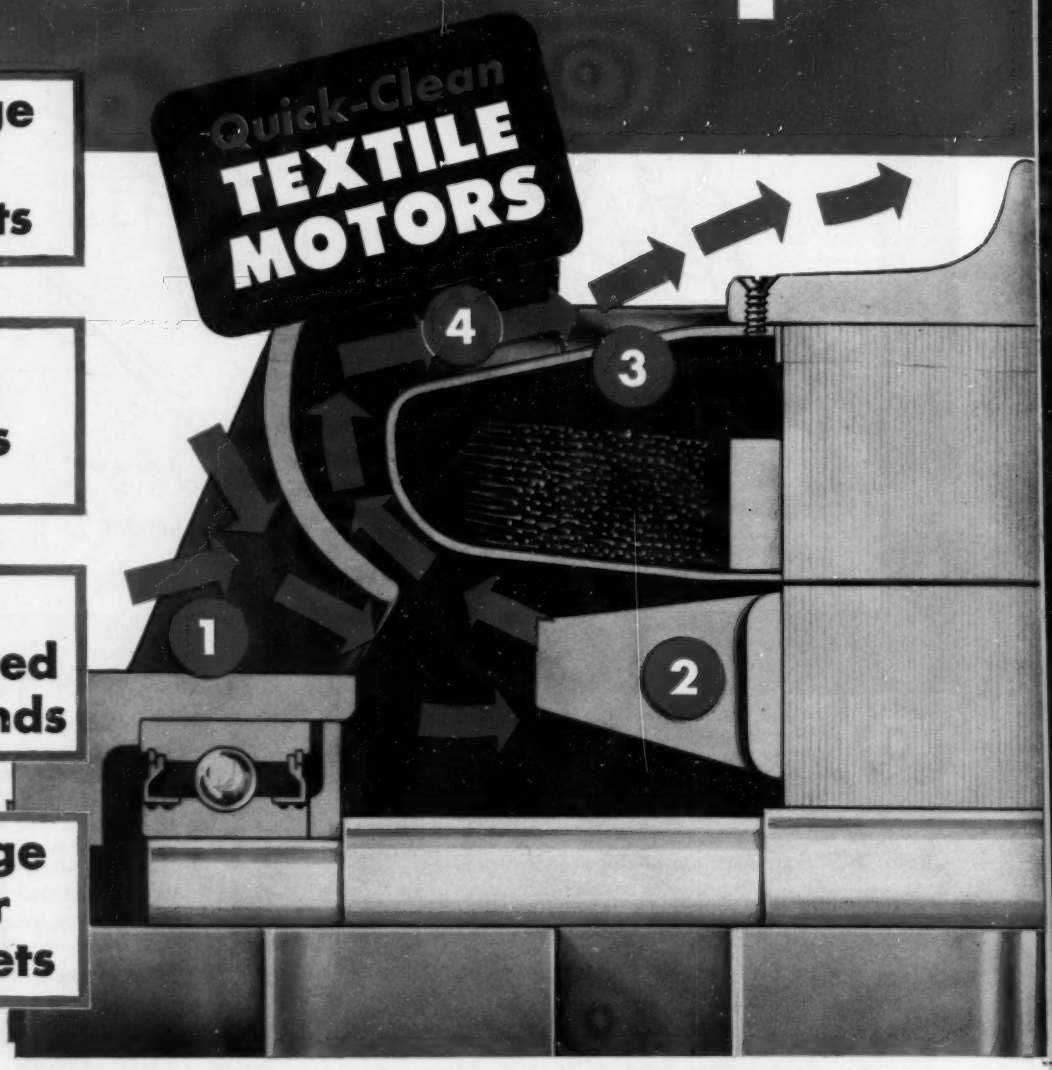
MOTORS that Dirt and Lint Can't Stop

1. Large air inlets

2. Big fans

3. Covered coil ends

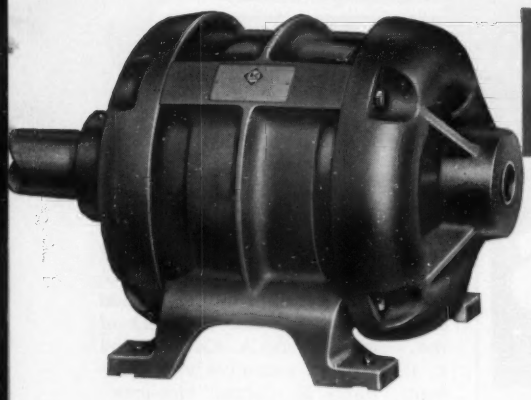
4. Large air outlets



GET COMPLETE INFORMATION: Call your nearby Allis-Chalmers District Office or distributor, or write Allis-Chalmers, Milwaukee 1, Wisconsin.

Texrope and Quick-Clean are Allis-Chalmers trademarks.

ALLIS-



Spinning

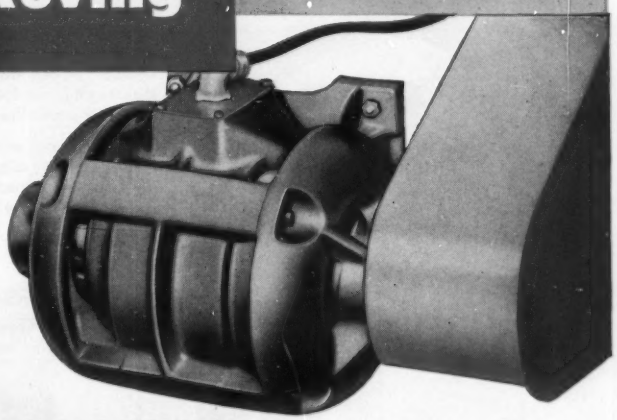
Two important features make this *Quick-Clean* motor your best buy for spinning frame duty. First, wide open design solves problems of clogging and overheating created by lint-laden atmospheres. Powerful fans sweep lint and dirt through wide open air passages and right out of the motor. Air passages are large, smooth, unobstructed.

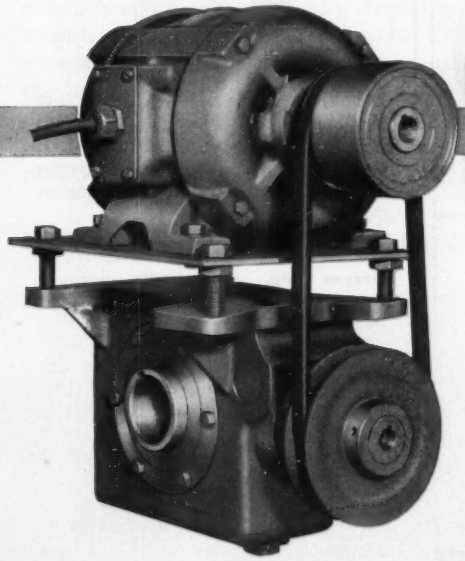
Second, pre-lubricated and sealed double-width, single-row ball bearings are used. They will operate for long periods without attention — yet can be cleaned and repacked when motor is dismantled. Will not drip grease that can damage product.

Roving

The same wide open, self-cleaning *Quick-Clean* design is used in this motor for roving frame applications. Special slow, smooth acceleration characteristics are built into the motor to provide slow starts, fine jogging — produce uniform roving.

No special resistors, no acceleration-reducing clutches, no special motor control are required with this motor. Acceleration is almost three times as long as a standard motor. Special conduit box connections permit relatively high torque when required, such as during "break-in" period of the frame.





Carding

Non-clogging, *Quick-Clean* motor is combined with a *Texrope* drive, mercury clutch and a highly efficient gear reducer to make a compact, reasonably priced power package for cards. These individual card drives solve problems of lighting, cleanliness and safety created by overhead shafting and belting. In addition, duct arrangements for air conditioning are simplified.

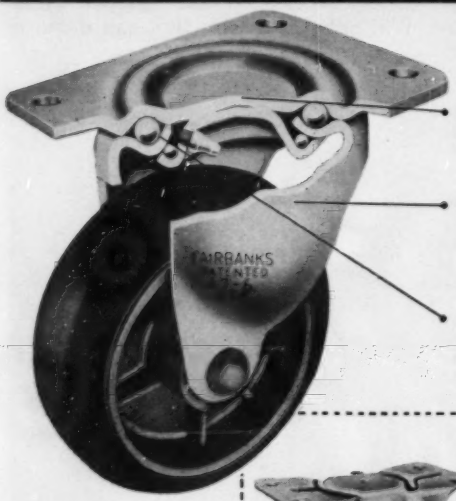
Unit requires practically same floor space as tight-and-loose pulley drive. It is mounted on card shaft — independent of card arch — with torque arm to keep gear box from rotating.

A-4600

CHALMERS

A-C ALLIS-CHALMERS

ACHIEVEMENT
IN CASTER DESIGN
FAIRBANKS
"LOCKWELD" Swivel Casters — Without King-Pin!



CHECK these unmatched advantages:

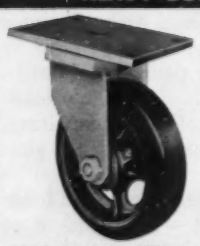
- No King-Pin. Patented "LOCKWELD" construction eliminates the major cause of caster failures.
- Patented leg design—spherical shape provides greater strength through better dispersion of shocks and overloads, easier swiveling under load.
- Larger raceways and ball bearings — perfectly aligned by the rigid welded structure — give faster, easier swiveling action.

Fairbanks Series "23" double ball race swivel casters, for medium duty, sizes 3" to 8".

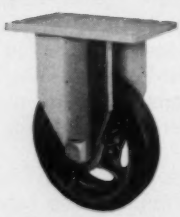
Fairbanks Series "33" rigid casters, match Series "23" casters in height, sizes 3" to 8".

Fairbanks Series "21" single ball race swivel casters, for regular duty, sizes 2" to 6". Matching rigid Series "31" casters available.

HEAVY DUTY STEEL CASTERS

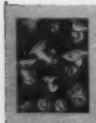


Fairbanks Series "27" double race swivel casters, for heavy duty, sizes 6", 8" and 10".



Fairbanks Series "37" rigid casters match the Series "27" casters in height, sizes 6", 8" and 10"

Fairbanks Series "500" Vulcanized Rubber Tired Wheels, roller bearing, sizes 3" to 18". Standard of the industry



YOURS ON REQUEST: Casters and wheels catalog complete with specifications and details. Write for your free copy today.

Order Fairbanks products through your local distributor who is always ready to serve you.

THE **Fairbanks** COMPANY

393 Lafayette Street, New York 3, New York
Branches: New York 3 • Boston 10 • Pittsburgh 22 • Rome, Ga.
Valves • Truck • Casters • Wheels • Dart & "PIC" Unions

SUPPLIERS News
WHAT THEY ARE DOING

Ave. Mr. McMurria covers Georgia, Alabama, and Florida.

Members of the board of directors of the newly formed **Continental-Diamond Fibre Division** of The Budd Company, Inc., include: Edward G. Budd, Jr., president of The Budd Company, who is also president of the subsidiary; H. A. Coward and E. R. Schmidt, executive vice-presidents; Harry K. Collins, vice-president; G. E. Lallou, secretary and treasurer; and E. E. Reardon, controller. As vice-president and general manager, Mr. Collins is chief administrative officer of the new company. He is assisted by J. Franklin Anderson and Ernest O. Hausman, vice-presidents. H. M. Dexter is general sales manager.

Roy H. Gavitt is now a technical sales representative for **Crown Chemical Corp.** He covers parts of Rhode

Mr. Gavitt

Island, New York, northern New England, and Canada. Coming to Crown from Verney Corp., where he served as superintendent of dyeing and finishing, Mr. Gavitt resides in Peterborough, N. H.

Thomas H. West, president of **Draper Corp.**, was recently elected a vice-president of Machinery & Allied Products Institute.

E. F. Drew & Co., Inc., has announced the appointment of Thomas R. Baravalle in a technical sales capacity in the Metropolitan New York area for the textile chemicals department. Mr. Baravalle brings to the company many years of experience in the textile wet processing industry.

The **Du Pont Company** will build a plant at Tucker, 13 miles northeast of Atlanta, Ga., and a sales office and paint service warehouse building in the Chattahoochee district, it was announced recently. It is expected that

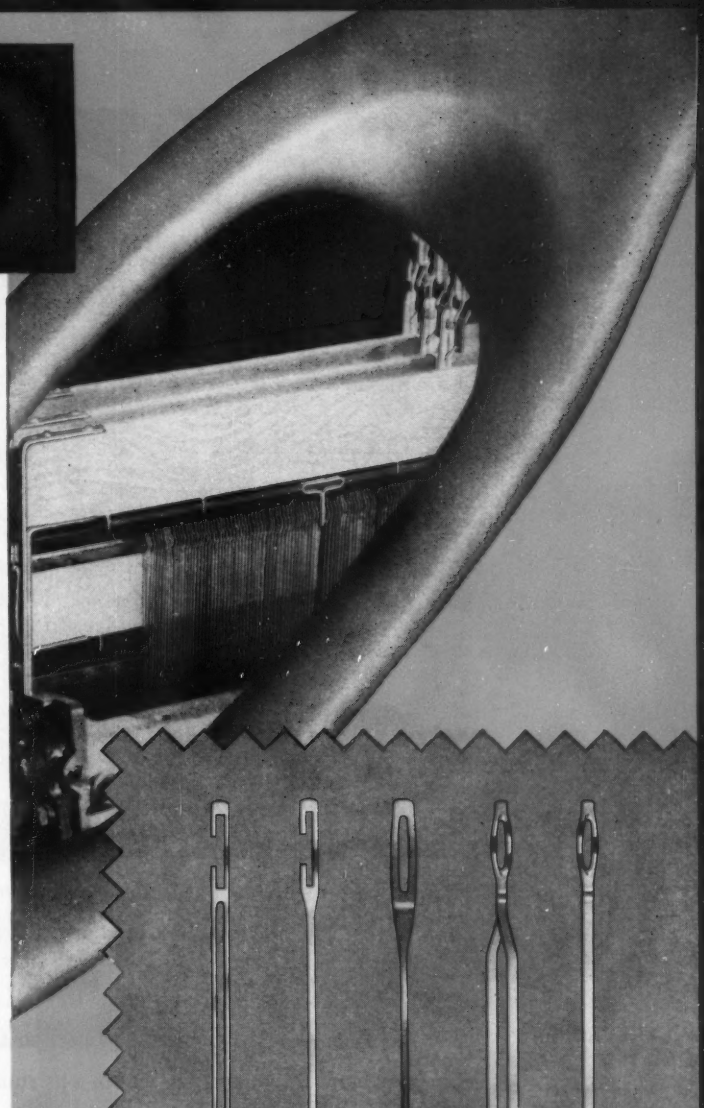
Stehedco and Southern

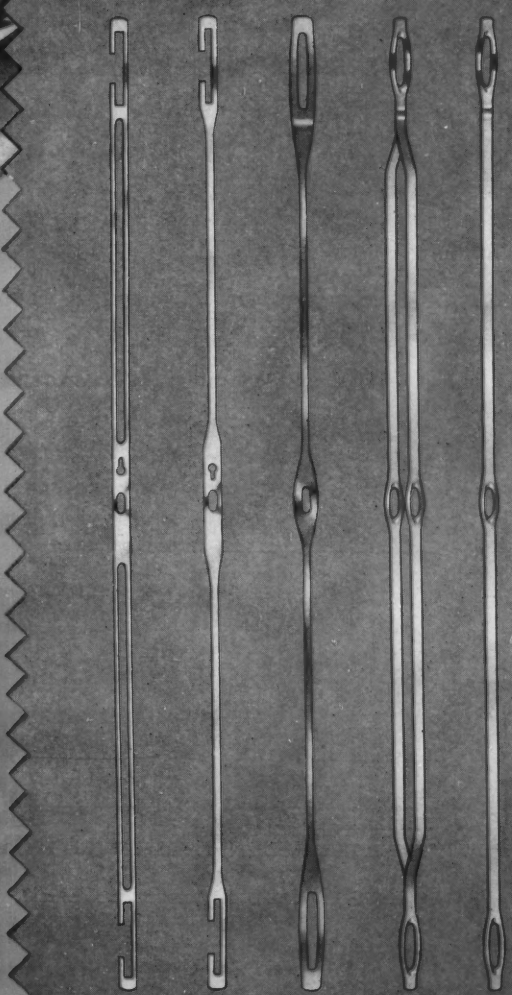
WHEN YOU LOOK A HEDDLE *IN THE EYE*...

you really see through the business of weaving superior fabrics, for it is the shape and polish of these all important eyes which will determine the quality of your finished product. It is at this point the Steel Heddle Mfg. Co., has concentrated its efforts in order to give you a heddle with an eye so scientifically designed all chafing and jagging is reduced to an absolute minimum.

The perfection attained in 52 years of manufacturing flat steel heddles is the result of constant experimentation on the part of STEHEDCO'S skilled craftsmen. It is this know-how and the high standard maintained in the selection of materials used that has given STEHEDCO its world-wide reputation for producing *superior quality Flat Steel Heddles.* STEHEDCO flat steel heddles not only possess these scientifically shaped eyes and highly polished finish, but also have rod slots so perfectly designed that they permit the heddles to "float" with the tension of the warp. *Stehedco Quality* means *Superior Quality* . . . that is why they are preferred by nine out of ten mills.

Products that "Weave the World's Needs"





1-6-13

STEEL HEDDLE MFG. CO.
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Other Offices and Plants
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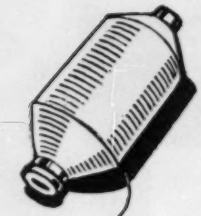
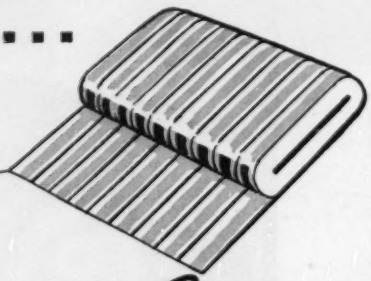
SOUTHERN SHUTTLES Paris Plant . . . Greenville, S. C.
A Division of STEEL HEDDLE MFG. CO.

STEEL HEDDLE COMPANY OF CANADA, LIMITED
310 St. Hubert Street Granby, Quebec, Canada



it's a smooth operation from start to finish . . .



when you use Clinton® starches

Smooth warp sizing. Smooth finishing. Yes, from the minute you start using Clinton starches you'll experience a smooth operation all down the line.

Clinton starches are widely used for warp sizing. They increase strength . . . smooth fibers so abrasion is reduced . . . resulting in smooth running warps. And that's only the beginning. At the finishing operation, Clinton starches provide proper hand and body to your fabrics.

So, from start to finish . . . from denim to marquisette . . . choose starches by Clinton.

. . . and remember technical service in connection with your specific problems is available upon request

Quality products

FROM THE WORLD'S CORN CENTER

CLINTON

CLINTON FOODS INC.
Corn Processing Division
CLINTON, IOWA

SUPPLIERS News
WHAT THEY ARE DOING

plant construction will begin this fall and that operations will start in late summer 1956. The plant will employ about 80 persons. The new sales office and warehouse building will replace the regional sales office and paint service warehouse now operated at 619-21 Peachtree Street in Atlanta.

Stein Hall & Co., Inc., has established the Southern Textile Laboratory and a Resin Laboratory at its Charlotte, N. C., plant. John D. Wathey is chief chemist of the textile laboratory and David E. Truax is

Mr. Truax

director of the Charlotte plant and laboratories. The textile laboratory is responsible for the development of new textile products, particularly for sizing and finishing operations. It offers general assistance to textile mills in the company's Charlotte and Atlanta territories and also assists the firm's sales division in promoting new products. The resin laboratory engages in research on textile resins and resins for other industries.

New officers of the **W. F. Fancourt Co.** are: president and treasurer, John L. Fancourt who was formerly vice-president and director; vice-president, J. Thomas Lindley who had been sales manager in charge of Fancourt's Burlington, N. C., office for several years; vice-president, Mrs. Edyth F. Morris; secretary, Miss Josephine Patla who has served with the Fancourt company for 33 years. Mr. Lindley and Mrs. Morris were also elected directors of the company. * * * Construction of a new plant outside the Philadelphia city limits is planned for the near future.

William R. Fox of Providence, R. I., now represents the following firms in Canada, as well as New England: Carolina Belting Co.; Dixon Corporation; Industrial Fur Processing Co.; J. C. Paddock Co.; The Pearson Manufacturing Co.; Russell A. Singleton

Sonoco SINGLE HEAD SPOOLS for Industrial Thread

Standard Sizes for Single Head Thread Spools are as follows:

Base Diameter	— 2½"	Barrel Lengths	— 2⅝"
" "	— 2¾"	" "	— 4-3/16"
" "	— 3"	" "	— 5⅜"
" "	— 3¼"		
" "	— 3½"		
" "	— 3¾"		
" "	— 4"		

3½" and 4" base spools also available with barrel lengths 6⅜" long. Double head spools can be supplied to meet your requirements.

standard of the world!

A SONOCO development widely accepted by the industry for packaging industrial thread. The tapered base permits free delivery without "snagging" during "take off," and uniform tension to sewing machine. Choice of regular or velvet surface. Ground ring or deep score on barrel optional. Can be supplied with metal ring in barrel, printed barrel, and plain or sulphur-dipped base. Colored lacquer tips may be ordered for identification. Consult your SONOCO sales-engineer or write us direct.

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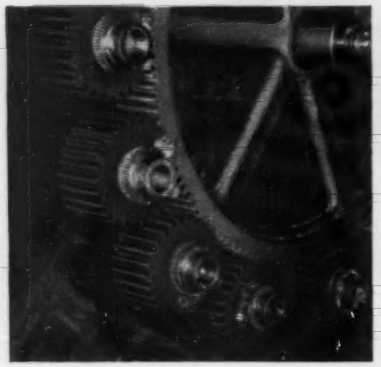
DEPENDABLE SOURCE OF SUPPLY

. . . From SPARTANBURG, S. C.

CDF

TEXTILE NEWS



CELORON GEARS

. . . reduce wear on larger, more expensive gear in this textile printing machine. Prior to the use of Celoron, metal gears had to be replaced after one to two months' operations. But, since installing nine Celoron Gears over a year ago, there has been no wear on the main gear, no replacement of the Celoron Gears. C-D-F Celoron has high impact strength, excellent resistance to heat, oil, and water. For gears that are silent in operation . . . with uniform strength in every tooth . . . get C-D-F Celoron. *Ask your gear cutter for Celoron . . . always in stock at C-D-F Spartanburg, S. C.!*

CELORON POT-EYE

Here's a low-cost molded product made from C-D-F Celoron. This pot-eye is extremely smooth and strong . . . resists wear, never corrodes. Has excellent resistance to high heat and moisture. Thousands of similar, low-cost parts can be produced by C-D-F . . . who has the know-how, the equipment to mold and machine plastics for any use.

Write now for C-D-F Celoron catalog with specifications and horsepower ratings.

ALL PRODUCTS OF

Continental-Diamond Fibre

CONTINENTAL-DIAMOND FIBRE DIVISION OF THE BUDD CO., INC.
NEWARK 11, DELAWARE

. . . with Textile Headquarters at 834 Hayne Street, Spartanburg, South Carolina.

Call Spartanburg 3-6397 for DILECTO and DIAMOND FIBRE materials handling equipment . . . trucks, boxes . . . loom parts . . . top-speed shipments of CELORON silent gear blanks . . . friendly service from your C-D-F sales engineer.

SUPPLIERS News — WHAT THEY ARE DOING

& Sons; Southern Spindle & Flyer Co.; and Superior Bolster Co.

Foxboro instrumentation for Asiatic industries will shortly be available through the Kokogawa Electric Works, Ltd., Tokyo, Japan, according to an announcement by B. H. Bristol, president of **The Foxboro Co.** The Japanese firm will manufacture and sell the full Foxboro line, as well as its own electrical strip chart instruments.

Robert R. Barrington, sales representative for the **Geigy Dyestuffs Division** of Geigy Chemical Corp., resigned his position with the corporation recently. He has been replaced by Eric A. Schlaginhaufen who was transferred from the Metropolitan New York area.

David Gessner Co. has two new vice-presidents—Richard C. Franklin and Theodore A. Dourdeville. Mr. Franklin is a sales engineer and Mr. Dourdeville is in charge of research and development.

Donald H. Nopson has been named new export field representative for the **Hyster Company.** He will cover the Latin American countries of Venezuela and Colombia.

Representing the **Industrial Supply Co.** of Clinton, S. C., in a part of North Carolina and Virginia is Richard E. Patton, who resides in Durham, N. C.

The **International Nickel Company, Inc.,** has opened the Southeast States Technical Field Section, Development and Research Division, with headquarters at 3179 Maple Drive, N. E., Atlanta, Ga. Embracing the states of North Carolina, South Carolina, Georgia, Florida, and Alabama, the new section will furnish industry in the area with technical information and assistance relating to alloys containing nickel. Richard J. Greene, metallurgist, is in charge of the section.

To provide for future overall company expansion, to improve customer relationship, and to give closer control to individual product lines, a realignment of management organization and responsibility was announced recently by **Walter Kidde & Co., Inc.** The program creates five divisions, each one of which will operate under a vice-president who will be general manager of the division and responsible for product designs, manufacturing, and sales. Of interest to personnel in the textile manufacturing industry are the engineering and research division, which is very active in many fields ranging from small hand extinguishers to auxiliary power units for the military, and the textile machinery division which is responsible for Kidde tension controls and yarn treating machinery. Vice-president D. Mapes is in charge of these two divisions.

Lincoln Engineering Co. has appointed Joseph J. Jenkins sales manager of its industrial division. Mr. Jenkins has served the company in various capacities for over 15 years.

Harry A. Burdorf, vice-president of the **Lunkenheimer Company,** has retired after 50 years of service.

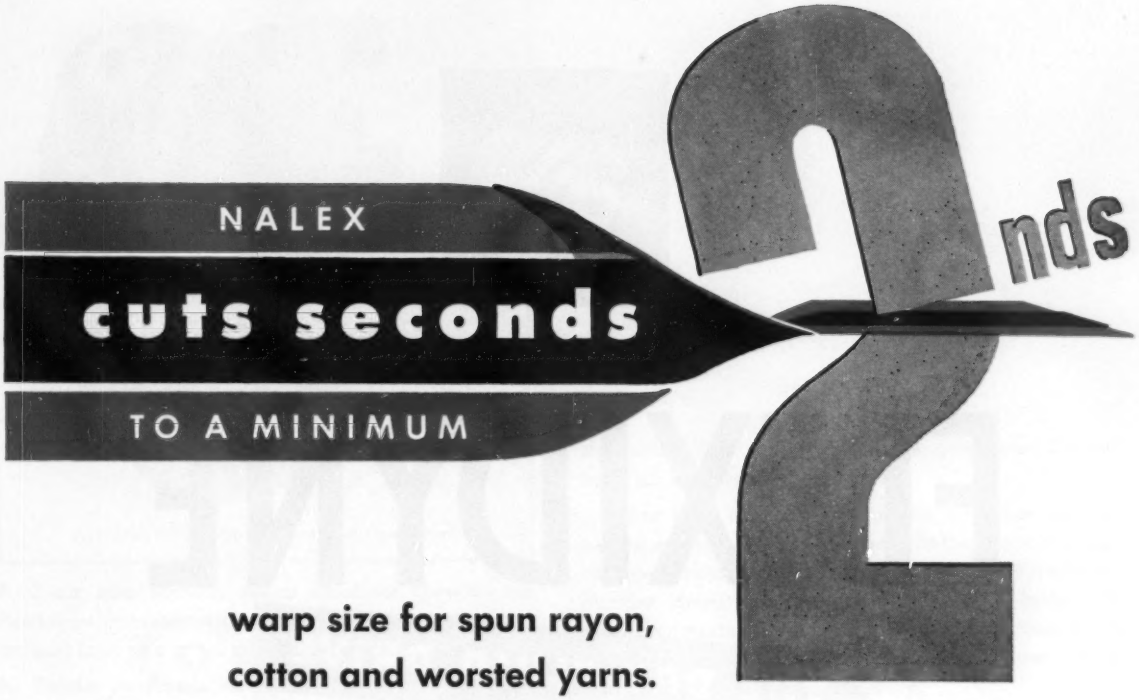
Metal Film Co., Inc., has appointed Edgar W. Dunham, Jr., formerly with Metlon Corp., as sales manager for the company's metallized yarn which was developed and initially sold by High Vacuum Metals, Inc., and is now being sold exclusively through this associate company.

Metro-Atlantic, Inc., has announced that Albert Castka is in charge of the newly organized laboratory and office in Fairlawn, N. J.

A rolling display of the latest in precision switches has departed from Freeport, Ill., on a nationwide tour to show industrial designers and plant operators how plant equipment and machinery can be made safer, more automatic, and more efficient. The display van is staffed by engineers of **Micro Switch,** a division of Minneapolis - Honeywell Regulator Co., which is sponsoring the tour of the firm's 186 authorized switch distributors in 172 cities. In each locality the van will visit major industrial plants to demonstrate new precision switch types while the engineers discuss switching problems with factory officials.

The story of industrial tapes is told in a new book, "Brand of the Tartan," which traces the history of **Minnesota Mining & Mfg. Co.** In a chapter called "The Great Depression: A Golden Era," the book describes the steps that led to tape's present place in the textile industry.

Construction has begun on an addi-



warp size for spun rayon, cotton and worsted yarns.

NALEX minimizes "seconds" by eliminating "hard size, warp clinging, fuzz balls," etc. High quality fabrics can be produced week after week.

NALEX cooks quickly. A minimum of size compound is needed. Film forming properties are excellent.

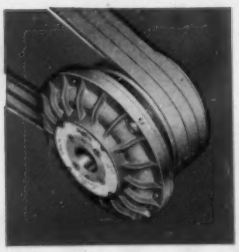
NALEX penetrates readily, which is necessary for combed yarns, and high sley constructions.

NALEX assures excellent weaving efficiency at relative humidities as low as 70%. Often even lower.

LOW HUMIDITY means better working conditions, lower maintenance costs, and a cleaner weave room.

STARCHES **National** STARCH PRODUCTS INC. RESYNS®

National Starch Products Inc., 270 Madison Ave., New York 16, N. Y. • Atlanta • Boston • Philadelphia
In Canada: National Adhesives (Canada) Ltd., Montreal



FLEXIDYNE

THE DRY FLUID DRIVE

DODGE of Mishawaka Announces An Entirely New Development in Industrial Power Drives that Promises to Revolutionize Drive Performance! Every Design Engineer and Plant Operating Man in America Will Want the Following Information.

Here are the facts on how easily Flexidyne handles difficult starting problems, and gives a *new* kind of protection against shock and overloads.

While new in the United States, this drive has already been proved in thousands of installations in Europe. Dodge has redesigned it to American standards and now makes its dramatic advantages available to all industry.

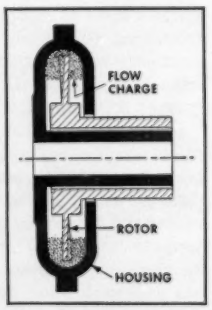
Flexidyne is a *dry fluid drive.* Its advantages over any other fluid-type drive are based on the fact that at normal operating conditions it *does not slip.*

WHAT IT IS

The Flexidyne Drive is made up of a housing, inside of which a rotor is free to turn concentrically. Between the two are fine particles of spherical steel shot, called the "flow charge," which acts very much like a fluid. The flow charge transmits power from housing to rotor.

This flow charge is easy to seal in, has a high density and can stand relatively high temperatures. The use of this flow charge makes possible a design that is simple, compact, economical, and gives outstanding new and different operating characteristics.

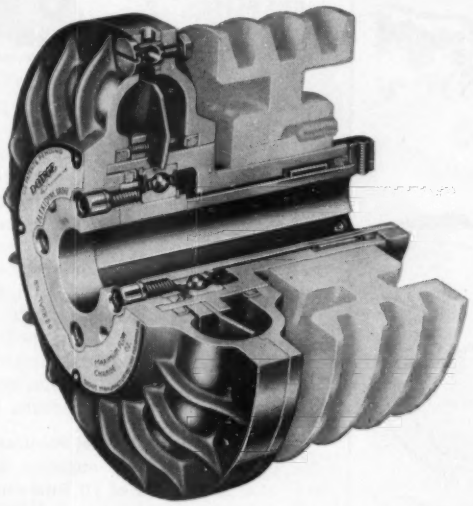
HOW IT WORKS



1. The motor is connected to the housing, and starts it turning at no load.

2. The flow charge is thrown to the circumference of the housing, is compressed by centrifugal force, and revolves with the housing.

3. The rotor, connected to the load, is started and accelerated by the friction and wedging action of the revolving flow charge.



FLEXIDYNE DRIVE (with Taper-Lock Sheave in phantom).

4. Rotor and housing reach identical speeds—the Flexidyne operates with ZERO SLIPPAGE between motor and load at normal running speeds.

5. Before overloads cause damage, the Flexidyne rotor slips relative to the housing, overcoming the friction and wedging action of the flow charge. A thermal switch (optional) automatically cuts the electrical circuit if an overload persists.

6. The amount of the flow charge determines the torque capacity.

WHAT IT DOES

The Flexidyne gives you the *exact* starting torque you need, for anything from the smoothest to the fastest start. Once the load reaches normal speed, there is zero slip, giving 100% efficiency. Also, it provides *accurate* overload protection, as it can be set to slip at any desired load. During starting and overload periods the current draw is at a minimum because with the standard Flexidyne setting the motor is never pulled down to less than 90% of synchronous speed.

All this is due to Flexidyne's completely new principle, which produces *constant torque* for a given input speed, regardless of the percentage of slip between the rotor and housing (which occurs only during starting or overload).

The Flexidyne is simple to select *off the shelf.* Each size has a standard horsepower rating and yet it is only a matter of minutes to vary the flow charge to give you your own *tailor-made torque* to suit the job.

With Flexidyne you get *uniform* performance regardless of changes in the surrounding temperature.

The Flexidyne has very long life and practically negligible maintenance. *Its simplicity guarantees its dependability.* Gas and diesel engines also benefit from all Flexidyne advantages.

Aside from Flexidyne's low first cost, low maintenance, and top efficiency, it permits the use of smaller, cheaper motors and controls with greatly reduced current demands and improved power factor. Its *smoother* starts and *gentler* overload protection avoid breakage and reduce maintenance on drives, gears, bearings and driven machinery.

FLEXIDYNE COUPLINGS

Two lines will be available—*Flexidyne Drives,* for convenient mounting directly on motor shafts and adapted for Dodge Taper-Lock Sheaves, and *Flexidyne Couplings* with Taper-Lock Bushings, for straight line drives. Several thousands of these units of French design, in capacities ranging from fractional to thousands of horsepower, are now in use in Europe. Dodge will first offer — from stock — four sizes rated at 3 to 30 hp at 1800 rpm. Other sizes will follow.

Write now for special bulletin, delivery dates and application information.

DODGE MANUFACTURING CORPORATION
3500 UNION STREET, MISHAWAKA, INDIANA

CALL THE TRANSMISSIONEER, your local Dodge Distributor. Factory trained by Dodge, he can give you valuable assistance on new, cost-saving methods. Look for his name under "Power Transmission Machinery" in your classified telephone directory, or write us.

DODGE
of Mishawaka, Ind.

SEE THIS *NEW BOOK*
ON TROLLEY CONVEYORS

Write for your copy today. Of special interest to production officials, this book shows latest developments and application of Trolley Conveyors. Profusely illustrated, an informative catalog. Whether or not you contemplate using Trolley Conveyors at this time, you will wish to have this book in your files. Write today for your copy—no obligation.

LOGAN CO., 206 CABEL ST., LOUISVILLE 6, KY.

Logan Conveyors

SUPPLIERS *News* — WHAT THEY ARE DOING

tion to the present Alexander Research Laboratories in Plainfield, N. J., a facility of **National Starch Products, Inc.** Plans for the combined laboratory call for a one-story structure containing 30,000 sq ft, centrally located on a landscaped, 8 acre tract. National's intention is to centralize and integrate the research, development, and technical staff of over 150 people into this modern scientific center. * * * The company's second polyvinyl resin plant has been placed in operation at Meredosia, Ill.

Perry Clanton has joined **Pneumafil Corporation** as a sales engineer and is in charge of sales of all Pneumafil

Mr. Clanton

equipment in the South Carolina territory. Mr. Clanton came to Pneumafil from Reeves Bros. in Spartanburg, S. C., where he served as assistant to the general manager.

The appointment of Harry J. Higgins to the position of sales manager has been announced by **Portland Copper & Tank Works, Inc.**

Filling the newly created position of assistant sales manager of the **Ridge Tool Co.** is D. H. Rowe.

To serve its clients in Europe and the Middle East to better advantage, **Saco-Lowell Shops** have arranged with Spinnbau G.m.b.H. of Bremen-Farge, Germany, to build its complete line of opening and picking machinery. Any correspondence regarding equipment built by Spinnbau may be addressed to Sacotex, Via Galilei 12, Milan, Italy. * * * Malcolm D. Shaffner, president of Saco-Lowell, is a newly elected member of the executive committee of the Machinery & Allied Products Institute. * * * The company has purchased over 300 acres of land near Easley, S. C., as a new plant site.

Herman L. Schwarz has been appointed to the position of assistant

so good

for the eyes

so kind

to the feet . . .

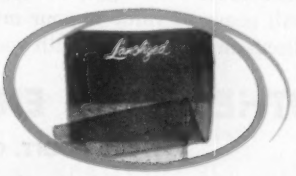
. . . . . *LANOLIZED* nylons . . . more beautiful, more alluring . . . soft as silk, smooth as velvet: the maximum in beauty, the ultimate in comfort!

OF COURSE . . . THEY'RE

Lanolized®

THE NEW MEMBER OF THE DuraBeau FAMILY

THE PROCESS THAT TREATS NYLON STOCKINGS WITH LANOLIN



SCHOLLER BROS., INC.

Authorized Manufacturers and Distributors of LANOLIZED . . . The Miracle Finish. Collins & Westmoreland Sts., Philadelphia 34, Pa. IN CANADA: Scholler Bros., Ltd., St. Catharines, Ontario

PIONEERS IN TEXTILE FINISHES SINCE 1907

SHOULD THIS MAN BE ON MANAGEMENT'S TEAM?

In molding employee opinions, in leading group thinking, in "Passing The Word" from supervisors, this man plays as important a part in mill operation as in his all-important work with his wrenches and other tools!

His knowledge of the objectives of management and his understanding of management's philosophy determine the very "vocal" voice he will give to company actions.

Southeastern Engineering Company has developed a successful twelve-hour conference training program in Waste Reduction and Waste Control to aid in giving your Section Men and Fixers the knowledge—other than mechanical—they need in today's competitive economy.

The effects of waste on unit cost and job security; quality losses and their effects; the cost of supplies; the importance of standard competitive job loads; how efficiency affects cost . . . these are a few of the topics discussed with your men.

The good ideas and suggestions that come out of this twelve-hour program will prove of value to your mill. We will appreciate the opportunity of discussing this service with you.

SOUTHEASTERN ENGINEERING CO.

WEST POINT, GEORGIA

Ben H. Crawford
West Point, Georgia

James I. Teat
Box 96-C, Closeburn Road
Charlotte 3, North Carolina

SUPPLIERS News — WHAT THEY ARE DOING

sales manager in the New York district for **Sandoz Chemical Works, Inc.**

Robert H. Wilkie has assumed the position of merchandising manager within the sales department of **New Departure Division,** General Motors Corp. Mr. Wilkie was formerly eastern regional sales manager for the division, which position is now occupied by Leonard F. Swoyer, formerly Bristol zone sales manager. In his position as merchandising manager, Mr. Wilkie is in charge of advertising, sales promotoin, forecasting, market research, and sales control.

The executive officers of the **Pennsylvania Salt Mfg. Co.** and headquarters of its operating divisions have been moved from the Widener Building to a new office building, Three Penn Center Plaza, in Philadelphia, Pa.

Claude W. Cain, who has been connected with **Steel Heddle Manufacturing Co.** and Southern Shuttles Division for the past 26 years in sales

Mr. Culp

and service work, has retired. Succeeding Mr. Cain as district manager with headquarters in Greensboro, N. C., is Dan M. Culp who has served Steel Heddle as a salesman for the past 12 years.

The Rochester, N. Y., sales office of **Synthane Corp.** is now located at 137 West Commercial Street, East Rochester, N. Y.

The position of executive vice-president of **The Texas Company** is now filled by James W. Foley who joined the company in 1932.

H. Gordon Smith, executive vice-president of **United States Rubber Co.,** has also been elected vice-chairman of the board and chairman of the executive committee. Chester J. Noonan, vice-president, has been named a member of the executive

When you receive Franklin Process Colored Yarns in your mill, there's more than meets the eye. For instance, these hidden values count heavily, as well as the obvious quality of yarns and color:

1. AS YARN MERCHANTS, we select and purchase for your account the best yarn for the purpose, thus saving you time and trouble and centralizing responsibility.
2. YOUR YARN CAN BE DYED IN 2500 LB. BATCHES, if your requirements are sufficiently large, which simplifies color handling in your mill and practically eliminates the shade variation problem.
3. THE LARGEST PACKAGE DYEING CAPACITY IN THE WORLD, with 5 strategically located plants, and adequate, up-to-date winding equipment, makes for better than average deliveries.
4. UNMATCHED LABORATORY FACILITIES AND NEARLY HALF A CENTURY OF EXPERIENCE practically guarantee *consistent* quality in yarns and colors.

These hidden values often represent the difference to you between success and failure in making yarn dyed fabrics. They are available at no extra cost. Get in touch with our nearest plant the next time you need colored yarns.

Franklin Process

COTTON YARNS & CUSTOM YARN DYEING
LARGEST PACKAGE DYERS IN THE WORLD

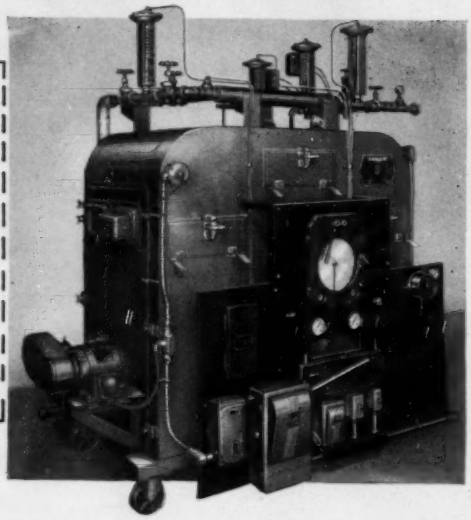
New York Representative
40 Worth Street

PROVIDENCE
PHILADELPHIA • GREENVILLE
CHATTANOOGA • FINGERVILLE, S. C.

FOR RESEARCH LABORATORIES . . .
UNIVERSITY LABS . . . PILOT PLANTS

THE NEW **Portable LAB DRYER by SARGENT**

FOR OUTRIGHT PURCHASE or on a SENSIBLE RENTAL-PURCHASE PLAN



FULL SIZE — 8′-6″ high x 8′-0″ wide x 6′-7″ deep.

MOBILE — mounted on heavy-duty ball-bearing casters that lock securely into position.

FLEXIBLE, VERSATILE — for steam or electrical heating of air stream. Material tested in trays, suspended from poles, on rolls, or any combination.

INSTRUMENTED FULLY and completely — ready to go to work for you without delay.

Modeled on the famous Sargent-developed, designed and built, research dryer used in Sargent's own drying research laboratory.

Here, at last, is a dryer to help you solve those constantly recurring and ever different drying problems of new fibres, new blends, new fabrics. Simple to operate. Accurate at every setting. Fantastically flexible in its ability to reproduce any combination of factors influencing drying of stock. Automatic or manual operation.

We believe the new portable lab dryer is equipped with more positive controls and a more simplified method of changing drying conditions within the machine, than ever before offered.

A telephone call to the nearest Sargent representative, or direct to us, will produce any additional information you want—AND fast action!

C. G. SARGENT'S SONS CORPORATION
INDUSTRIAL DRYERS DIVISION
Graniteville, SINCE 1852 Massachusetts

PHILADELPHIA 19 — F. E. Wasson, 519 Murdock Road
CINCINNATI 15 — A. L. Merrifield, 730 Brooks Avenue
CHARLOTTE, N.C. — W. S. Anderson, Carolina Specialty Co.
ATLANTA, GA. — J. R. Angel, Mortgage Guarantee Building
TORONTO, CAN. — Hugh Williams, 47 Colborne Street

SUPPLIERS News
WHAT THEY ARE DOING

committee. For several years Mr. Smith was general manager of the company's textile division.

To better serve the growing sales territory in the midwest, the **Selig Company** has opened a new Kansas City, Mo., branch. The facilities include manufacturing space, offices, display room, warehouse, and shipping department.

New million-dollar facilities for the production of **Shawinigan Resins Corp's** Gelvatol polyvinyl alcohol will be constructed at the company's plant in Springfield, Mass. Completion of the unit, which will have a multi-million pound capacity, is expected during the fourth quarter of 1956.

The **United States Testing Co.** has opened a complete cotton fiber laboratory in Brownsville, Texas, which features 24-hour cotton fiber testing service for customers in the lower Rio Grande valley.

John P. Brun has returned to the Basle, Switzerland, office of **Universal Winding Co.** after having made a study of the company's complete line of equipment. He is contacting mills in Switzerland and assisting Universal agents in Italy, Greece, Turkey, Syria, and Israel.

New officers of **Vickers Incorporated are:** Harry F. Vickers, vice-chairman of the board; Kenneth R. Herman, president; and Dr. N. E. Edlefsen, vice-president for engineering. Mr. Vickers is founder of the corporation, Mr. Herman was vice-president and general manager, and Dr. Edlefsen a newcomer.

Norman K. Anderson, formerly general sales manager, has been named vice-president-sales and King DeSeve, formerly manager of manufacturing, vice-president-operations, by **Warner Electric Brake & Clutch Co.**

Hugh C. Land will succeed William P. Drake as head of the **Pennsylvania Salt Manufacturing Co.'s** Industrial Chemicals Division. Mr. Drake recently was named executive vice-president when president George B. Beitzel announced plans to retire later this year upon completion of 25 years' service with the company.

(Continued on page 72)

FOR IMPROVED WHITES

DERGOPAL®
fluorescent whitening agents

- *substantive*
- *efficient*
- *economical*
- *liquid - easy to use*

DERGOPAL C

for WOOL, NYLON and ACETATE. Effective for processing top, stock, yarn and piece goods. Produces sharper contrast between white and colored patterns in checks, plaids and tweeds. Eliminates yellow cast of wool and synthetic fibers.

DERGOPAL D

used in the same manner as Dergopal C and for the same fibers and fabrics when a definite BLUE-WHITE is required.

DERGOPAL G

for use under strong acid conditions as in CARBONIZING or ACID FELTING of WOOL.

DERGOPAL B

for COTTON, RAYON and CELLULOSIC MATERIAL as an after-treatment. Also useful in bleaching, often allowing reduction of the amount of bleach in the bath.

DERGOPAL BX

used in the same manner as Dergopal B and for the same fibers and fabrics when a definite BLUE-WHITE is required.

DERGOPAL FP

for special use on COTTON and RAYON in FLAMEPROOFING compounds which tend to yellow the fabric. Applied in same bath. Particularly successful in conjunction with Arko Flameproofing Compound A S.

AC INC®

for technical information write:

ARKANSAS CO., INC.

Serving the Textile Industry for over 50 Years

NEWARK, NEW JERSEY

75,000 reasons why Butterworth is headquarters for Cylinder Dryers . . . . . .

Butterworth's Drying Machinery Division has made more drying cylinders than all other manufacturers combined — 75,000 as of recent count. It is not a mass production operation. Butterworth has $160,000 of pressure vessel fabricating equipment. All cylinders are made from certified materials and inspected at every stage to make sure they provide greater drying capacity per dollar.

Each Butterworth installation is planned for its specific job . . . engineered for the weight of cloth, degree of moisture content, and dryness desired. And every Butterworth Cylinder is backed by the Butterworth service organization.

Your choice of copper or stainless steel cylinders . . . fabricated or cast-iron columns . . . vertical or horizontal arrangement . . . V-belt, gear or sprocket-and-chain drive. And Butterworth's new seam-welding technique gives a weld so fine it can't be seen with the naked eye!

If your mill needs increased drying capacity, lower drying cost, call in a Butterworth engineer for facts and figures on new Butterworth Dryers. No obligation of course.

H. W. BUTTERWORTH & SONS CO.
BETHAYRES, PA.
1211 Johnston Bldg., Charlotte, N. C.
187 Westminster St., Providence, R. I.

Representatives in Principal Cities of the World

Machines for Bleaching, Boiling-Out, Dyeing, Mercerizing, Finishing & Embossing—Pot Spinning Machines for Synthetic Fibers : : Calender Rolls : : Tenter Chains

Carl Schmidt, Jr. of J. P. Stevens Co., Clemson, S. C., receives Drying Cylinder No. 75,000 made by Butterworth. Others shown are Vice-President De Haven Butterworth (left) and President J. Ebert Butterworth. J. P. Stevens Co. plants now have 389 Butterworth Drying Cylinders with 50 additional on order.

Du Pont develops high-temperature piece-dyeing methods for new synthetic fibers...

brings you a full range of fast colors at less cost!

DU PONT RESEARCH led the way to high-temperature (250°F.) stock dyeing of the newer hydrophobic fibers. Extending this principle of high-temperature application to piece dyeing — to achieve the same excellent fastness and color build-up obtained in stock dyeing — presented equipment problems.

Du Pont technicians went to work to adapt high-temperature methods to piece dyeing. One result was the Barotor, such as this one. It is operated at the Waldrich Company in Delawanna, New Jersey, where excellent results have been obtained.

While developing new methods, Du Pont also introduced "LATYL"‡ dyes for "Dacron"* and "SEVRON"‡ dyes for "Orlon"† acrylic fibers — dyes with excellent light and wet fastness. The combination of these new dyes and high-temperature dyeing results in high-quality dyeings in a full range of deep shades.

Du Pont will be glad to give you the latest information on high-temperature dyeing. Just contact your Du Pont representative or write to E. I. du Pont de Nemours & Co. (Inc.), Dyes and Chemicals Division, Wilmington 98, Delaware.

DISTRICT OFFICES—Atlanta, Georgia; Charlotte, N. C.; Chicago, Illinois; Los Angeles, Calif.; Rumford, R. I.; New York, N. Y.; Philadelphia, Penna.
In Canada: Du Pont Company of Canada Limited, Montreal, Quebec

Improved results with high-temperature piece dyeing:

for **NYLON** – shades are uniform from run to run, have outstanding fastness.

for **"DACRON"** – need for a chemical carrier is eliminated, which cuts costs. Color build-up is excellent, giving deep, bright colors with no spotting or streaking, no loss of light fastness.

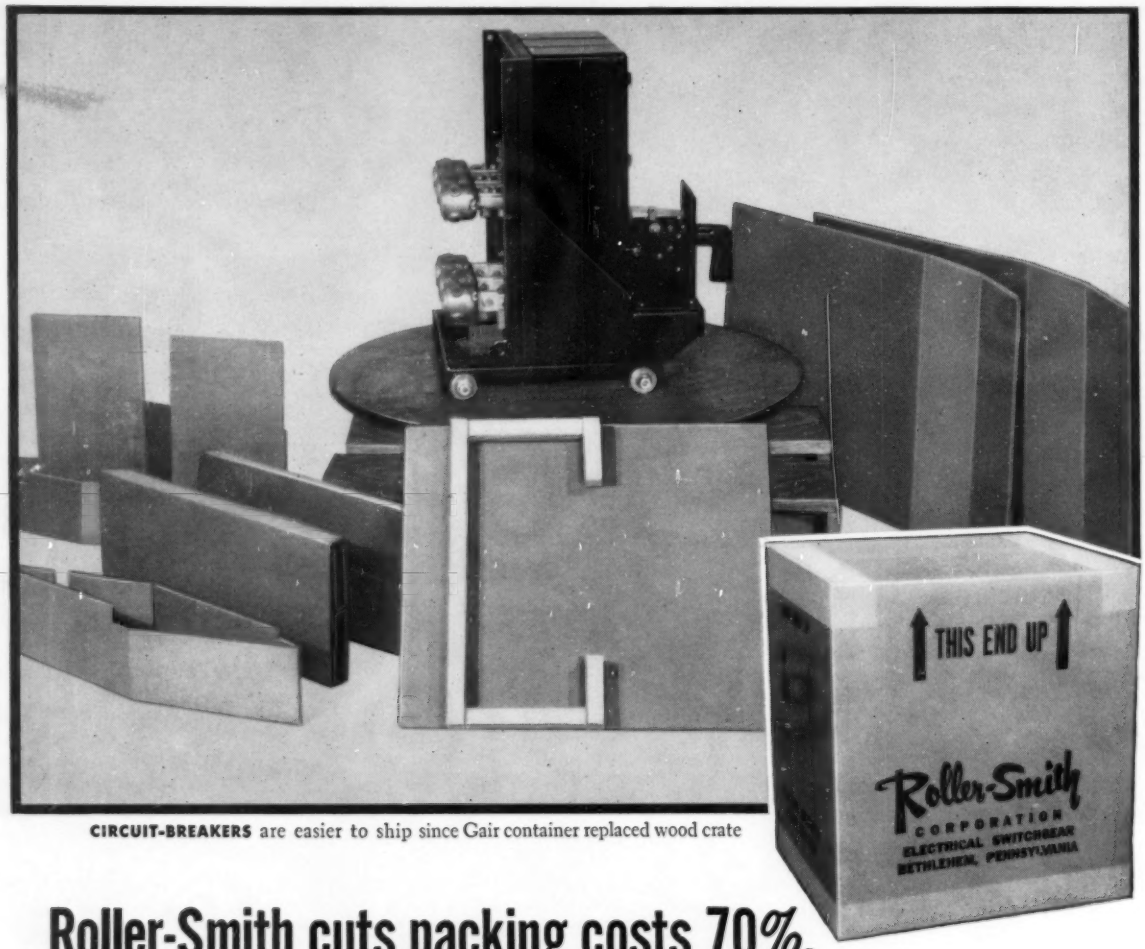
for **"ORLON"** – shade build-up is more efficient, cutting down on dyeing cycle and giving popular deep shades not attainable by any other method. Dyer also gets full fastness values from the Du Pont "SEVRON" dyes.

‡Reg. U. S. Pat. Off.
*"Dacron" is Du Pont's registered trade-mark for its polyester fiber
†"Orlon" is Du Pont's registered trade-mark for its acrylic fiber

Du Pont Dyes

DU PONT
REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*



CIRCUIT-BREAKERS are easier to ship since Gair container replaced wood crate

Roller-Smith cuts packing costs 70%, shipping weight 27½% with new Gair Container

These percentages are based on actual time studies run by Roller-Smith Corporation, Bethlehem, Pa., on the packing of their heavy circuit breaker.

Cutting lumber, assembling a wooden crate and packing used to take 57 minutes. With the new Gair container the job takes only 17 minutes — a 70% reduction. Material costs also dropped 9¾%, and net shipping weight of the container plummeted 27½%.

What's more, the Gair container has chalked up an excellent record for protection in transit, as well as guarding against loss of accessories often included in shipments. Extra dividends include:

- *advertising* value of Gair's printing
- *dust protection* of Gair's sealed construction
- *elimination of safety hazards* in handling wood
- *reduction* of required storage space

Maybe there's some way Gair could improve your product's shipping container. How about calling your nearest Gair container plant and finding out?

YOU'RE LIVING NEXT DOOR TO THE EXPERT

GAIR CONTAINER PLANTS: Atlanta, Ga. • Cambridge, Mass. • Cleveland, Ohio • Holyoke, Mass. • Jackson, Miss. • Los Angeles, Cal. • Martinsville, Va. • New Orleans, La. • No. Tonawanda, N.Y. • Philadelphia, Pa. • Plymouth, Mich. • Portland, Conn. • Richmond, Va. • Syracuse, N.Y. • Teterboro, N.J.

SINCE 1864

GAIR

SHIPPING CONTAINERS • FOLDING CARTONS
PAPERBOARD • KRAFT BAGS AND WRAPPINGS

ROBERT GAIR COMPANY, INC. • 155 EAST 44TH STREET • NEW YORK 17, N.Y.

SC.5.8

DRUSIL

PROVEN silicone finish for all fabrics

Proved by DRUSIL's Million-Yard Test

Drew's half-century of experience and developed techniques created DRUSIL, the now proven silicone water-repellent finish for all fibres and fabrics; having exceptional durability.

- Over a million yards of all types of fabrics treated—including wool—is proof of its performance.
- Its finish and hand imparts an intrinsic value now looked for.
- DRUSIL's exclusive molecular structure gives it its stable properties, ease of application and maximum durability.
- DRUSIL improves abrasion resistance, tear strength and sewability. Does not affect fabrics' shade or light-fastness of colors.

You should get the complete DRUSIL story. Write for our latest Technical Bulletin D-6. Our plant-trained Technical Staff awaits your call. No obligation, of course.

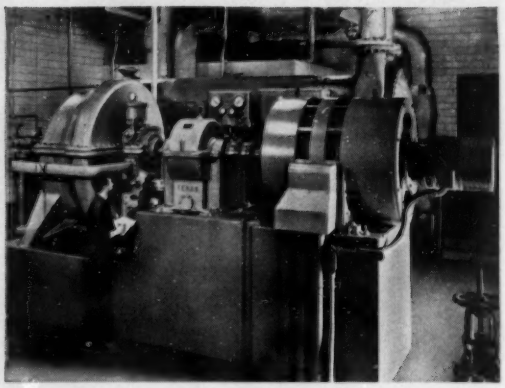
DREW PRODUCTS

E. F. DREW & CO., INC.

15 East 26th Street, New York 10, New York

BOONTON, N. J. • CHICAGO 1 • BOSTON 10 • PHILADELPHIA 7 • GREENVILLE, S. C. • GREENSBORO, N. C. • IN CANADA—AJAX, ONTARIO

GERRISH MILLIKEN REFRIGERATES WITH A CARRIER CENTRIFUGAL



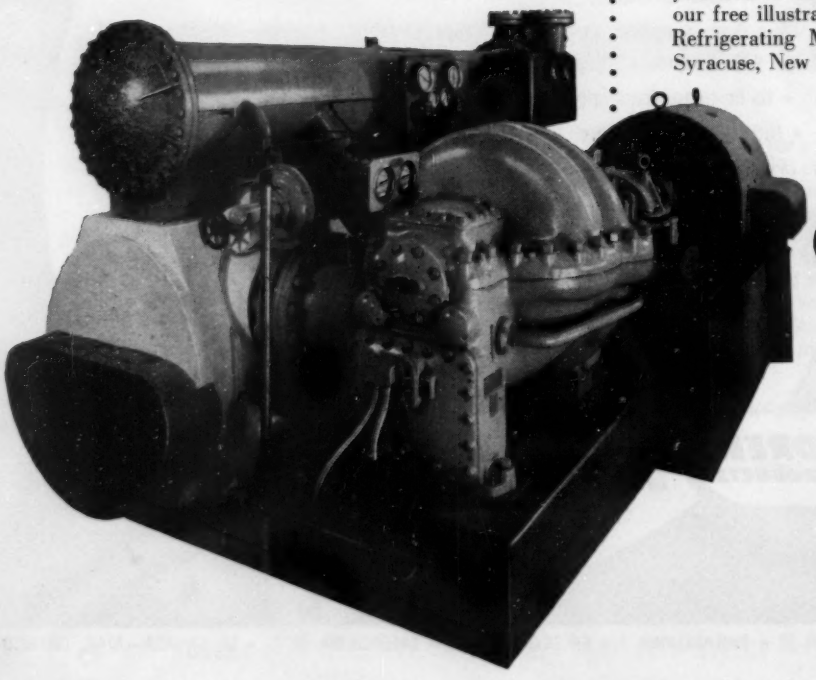
The Gerrish Milliken mill at Pendleton, S. C., uses this 900-ton-capacity Carrier Centrifugal Refrigerating Machine to chill spray water for several Carrier central station air conditioning systems. Throughout the mill, temperature and humidity are held at precise levels.

Carrier Centrifugals serve dependably — often around the clock — in many other mills, including Greenwood, Amertron, Spindale and Stonecutter.

Carrier developed the first centrifugal refrigerating machine in 1922. Carrier has built more of them — by far — than all other makers combined.

For unbeatable performance, why not insist on Carrier centrifugal refrigeration for *your* mill? It can serve dependably as the heart of *any* air conditioning system. Carrier Centrifugals are available in many sizes from 100 to 4000 tons cooling capacity.

Make use of our experience and assistance. Call your nearest Carrier office. Or write us direct for our free illustrated catalog—"Carrier Centrifugal Refrigerating Machines." Carrier Corporation, Syracuse, New York.



Carrier

air conditioning

refrigeration

industrial heating

Available about Oct. 1

Commercial Production of Celanese* Fortisan*-36

SUPER-STRONG HEAVY DUTY RAYON

Fortisan-36 is a high-denier, heavy duty saponified acetate rayon—an even stronger version of famous Fortisan, designed primarily for industrial application.

Pilot plant quantities are now undergoing evaluation in mechanical rubber goods and other fields. Limited poundage is available for further experimentation.

Facilities for expanded production of Celanese Fortisan-36 are nearing completion. Commercial quantities, including 800 denier—800 filament and 1600 denier—1600 filament yarns will be available for delivery about October 1.

Extensive research and development work, both by Celanese and many large industrial users, has established Fortisan-36 as a singularly useful industrial yarn.

Fortisan-36's very high tensile strength, extremely high modulus and excellent dimensional stability indicate that it will have an important place in the making of

V-Belts • Conveyor Belts • Fire Hose
Plastic Laminates • Filters
Paper Reinforcements
and many other applications

If you have a stake in any of these areas—or are concerned with any industrial application where high strength yarns are important—we'd like to work with you on the application of Fortisan-36 to your products.

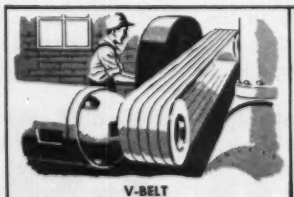
Our technical men have a wealth of data which may indicate some new approaches to your problems.

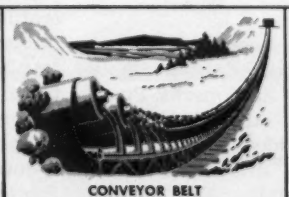
For further information, write Celanese, Industrial Sales Department, Textile Division, Charlotte, North Carolina.

Celanese* Fibers for Industry

FORTISAN* • FORTISAN*-36 • ARNEL† • ACETATE • VISCOSE-RAYON

*Reg. U.S. Pat. Off. †Trademark


V-BELT


CONVEYOR BELT

HIGH PRESSURE HOSE

FIRE HOSE

STOP THE THREAT OF CORROSION WITH TRUSCON SPEED REX

PROVIDES TOUGH, RESISTANT PAINT FILM FOR METAL, WOOD OR CONCRETE SURFACES!

TEXTILE manufacturers are using "Speed Rex" to lick corrosion problems caused by condensation. "Speed Rex" is the *toughest* all-purpose coating ever formulated for painting machinery, tools, conveyors, benches, guard rails and most other plant equipment.

AND "Speed Rex" resists *hard knocks* as well as moisture and chemicals. You paint less often when you standardize on "Speed Rex" because rough, tough physical abuse bounces off the rugged hide of this protective coating.

THE reason "Speed Rex" can take so much punishment is Devran . . . an Epoxy Resin that gives paint greater wear-ability and resistance to acids, alkalis and moisture.

GET full information on how to solve condensation problems and other painting problems in the textile industry. Send coupon today!

TRUSCON Laboratories
Division of Devoe & Raynolds Co., Inc.

TRUSCON LABORATORIES
Box 69, Milwaukee Junc. P.O., Dept. T-4
Detroit 11, Michigan

Please send details about Speed Rex

NAME_____

ADDRESS_____

CITY_____ ZONE_____ STATE_____

SUPPLIERS News
WHAT THEY ARE DOING

(Continued from page 64)

Consolidation of its New England operations has been announced by Geigy Dyestuffs, division of **Geigy Chemical Corp.**, New York, N. Y. Instead of carrying on business at two locations—Boston, Mass., and Providence, R. I.—the New England branch is now located at 33 Industrial Place, Newton Upper Falls 64, Mass. William H. Turner continues to serve as branch manager.

The expansion of its Philadelphia Branch Laboratory has been announced by **United States Testing Co.** of Hoboken, N. J. This move is to new and larger quarters at 3925 M. Street, Philadelphia 24, Pa.

William T. Burgin and V. J. Dionne have joined the Vicara Sales Department, Fiber Division, **Virginia-Carolina Chemical Corp.** with headquarters at the Vicara sales offices at 99 Park Avenue, New York 16, N. Y. Mr. Burgin was formerly associated with Robbins Mills; Mr. Dionne with the United States Rubber Co.

Industrial Truck Driver Training Is a "Must"

AS A POSITIVE aid to both large and small companies in the maintenance of an effective industrial truck driver safety program, 28 points were recently cited by W. A. Meddick, vice-president of The Elwell-Parker Electric Co.: Here are some of the more important ones:

Drivers must stop within eight feet in open aisles or roadways; within three feet in narrow aisles, near machinery, and in congested areas. A distance of at least ten feet must be maintained between moving vehicles. Extreme care must be exercised where floors are wet or greasy.

Trucks must be completely stopped and the horn sounded before: (a) entering doors of all buildings, (b) approaching blind corners, (c) turning into or crossing main aisles, (d) entering ramps.

Lift no loads above capacity of vehicle.

Don't allow loads to obstruct the operator's view.

Loads should never be picked up with forks off center.

Personnel other than the driver himself should never operate or ride on an industrial truck.

Loads should be carried as low as possible.

Doorways, corners, and other travelways should be outlined with bright colors or hash marks. Pipes, machinery, and other obstructions should be outlined in contrasting colors so that drivers can spot them immediately. Also, trucks should be painted in bright colors so they may be seen by other personnel.

Avoid making sudden or jerky stops.

If the truck has a tilting device, it should be used.

Railroad tracks should always be crossed diagonally instead of at right angles.

Traffic rules should always be observed.

Trucks should not be driven with wet or greasy hands.

Operators should slow down before opening doors by remote control.

Fire prevention rules should always be observed.

Swinging doors should be approached squarely and in the center to avoid breaking hinges.

The horn should be used, but not abused.

Trucks should be parked safely.

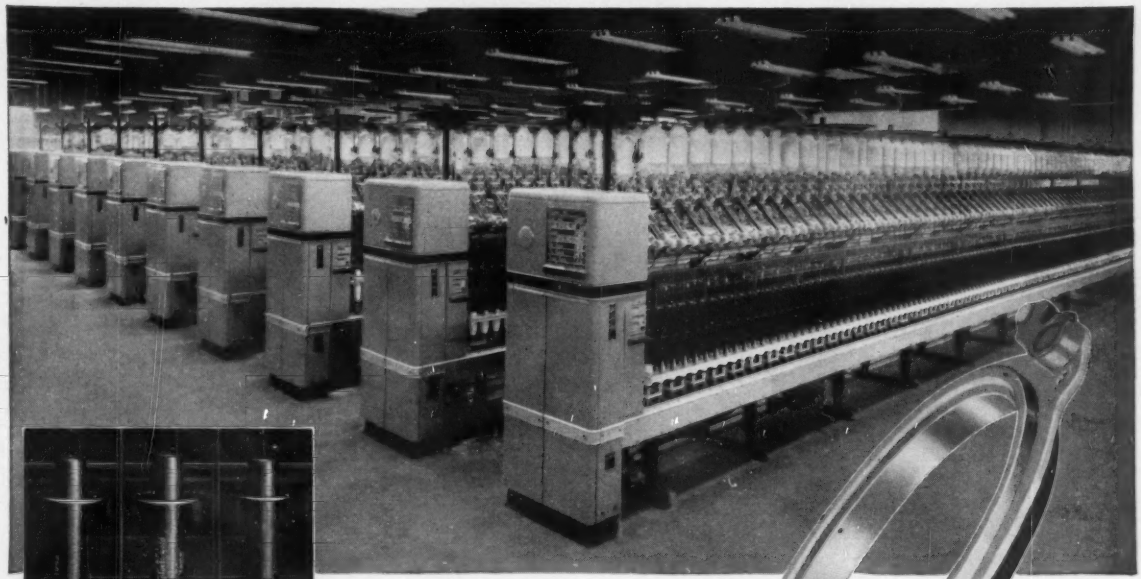
Operators should look before they start and be certain that personnel and objects do not obstruct the path of the truck, not only at leg level but also at head level. Particular care must be taken before backing out from a load.

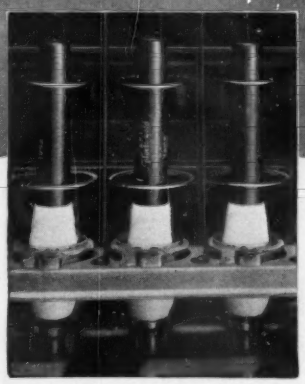
Every collision should be reported to authorized personnel.

If more than one truck is operating in the same area, the one following must stay at least 15 feet behind. Trucks should never travel two abreast.

Hoists should be handled carefully. They should not be raised or lowered when traveling. Hands should be kept off hoist tracks.

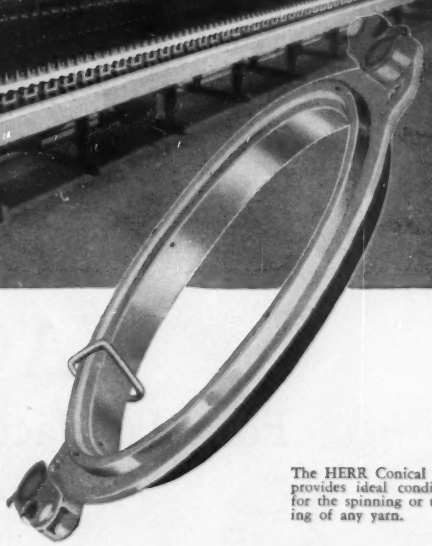
DELAWARE MILLS





Says Mr. William C. Appleton, President of Delaware Mills, Inc., "We are well satisfied with our HERR Conical Rings both on spinning and twisting."

Herr Conical Rings are used on these new Saco-Lowell GWALTNEY Spinning Frames. They are also used on Delaware Mills — Universal Winding Company 10B Twisters.



The HERR Conical Ring provides ideal conditions for the spinning or twisting of any yarn.

Produce High Bulk Orlon at Increased Speeds and with Improved Quality by Using . . . .

HERR CONICAL RINGS

Equip with HERR Conical Rings and begin to enjoy these profit making features. You can speed up production, improve quality and lower costs with HERR Conical Rings. You'll gain too, many other advantages. They stop yarn breakage, permit heavier doffs, produce smoother yarns and reduce fly. You'll enjoy cleaner yarn because oil is not thrown off. Frames and room floors stay cleaner. Travelers last longer because oil is carried in capillaries to ring surfaces. Maximum spindle speeds are achieved.

Learn more about these wonder rings. Write today for descriptive literature.

FOR SPINNING AND TWISTING WORSTED, WOOLEN, RAYON, NYLON, ORLON AND BLENDED YARNS OF ALL TYPES

HERR MANUFACTURING CO., INC.

310 Franklin St., Buffalo, N. Y.

L. F. Dommerich & Co., Inc.

Executive and General Offices

271 MADISON AVENUE

NEW YORK 16, N. Y.

Telephone: Murray Hill 3-8650

FACTORS

For Manufacturers and Merchants

Inquiries as to our services solicited

●

BUSINESS ESTABLISHED 1840

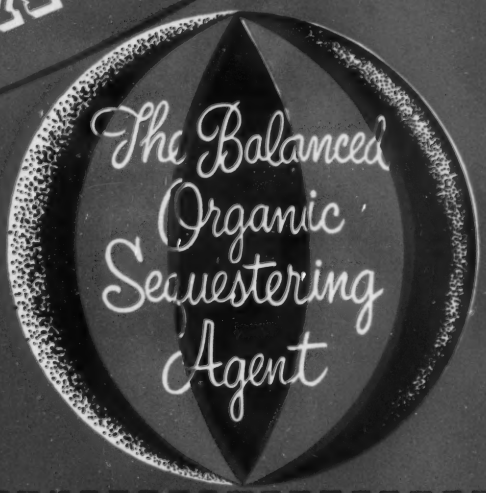
●

L. F. Dommerich & Co. California Corp.

819 Santee St., Los Angeles

Trinity — 7171

CHEELOX B-14



Specifically designed to inactivate CALCIUM and MAGNESIUM PLUS all traces of IRON. In alkaline processing liquors, calcium and iron sequestering is accomplished SIMULTANEOUSLY.

CHEELOX B-14 is the new, all-purpose chelating agent which is soluble and stable at all temperatures in neutral, acid and alkaline solutions. For economical control of metal ions, regardless of the problem, Cheelox B-14 is the product to use.

To determine the effectiveness and economy of Cheelox B-14, we suggest you compare this new sequestering agent with the product you are now using. .

Send today for a sample and technical data on the uses of Cheelox B-14.

From Research to Reality

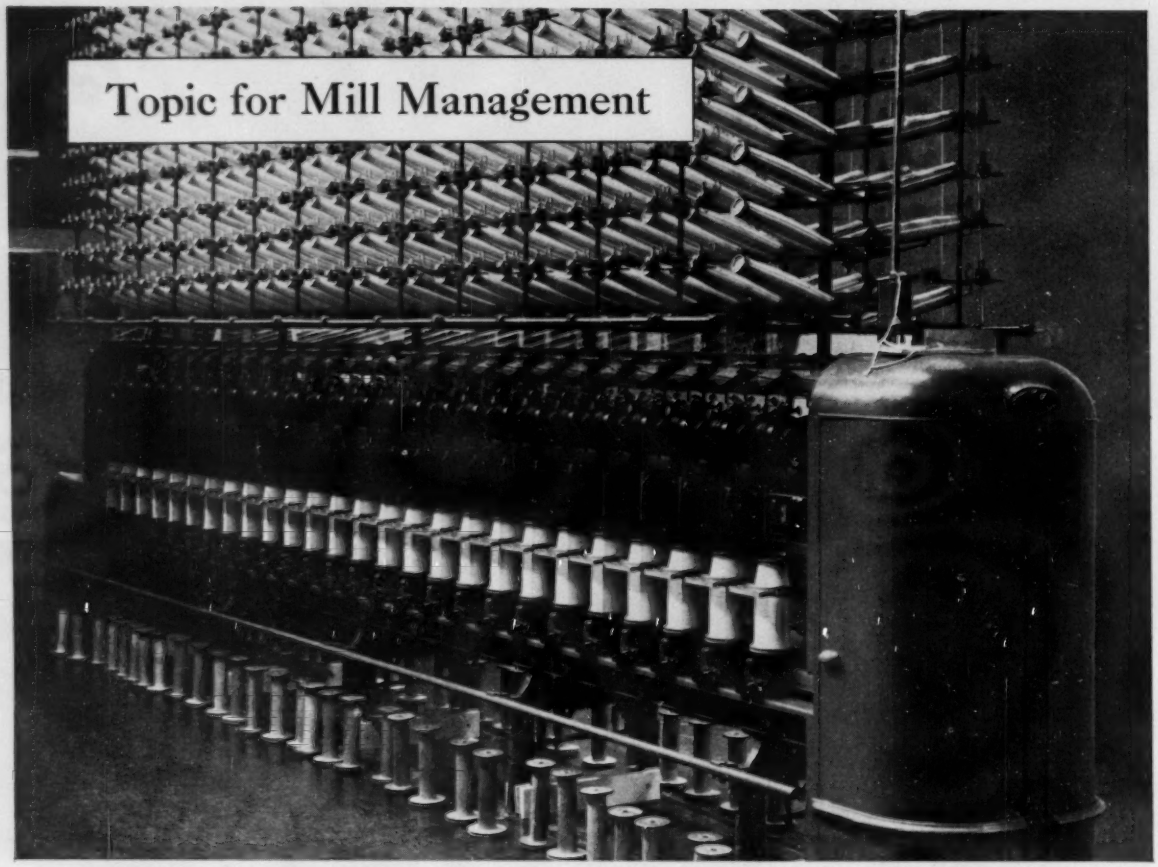
ANTARA® CHEMICALS

A SALES DIVISION OF GENERAL ANILINE & FILM CORPORATION

435 HUDSON STREET · NEW YORK 14, NEW YORK

SALES OFFICES: New York • Boston • Providence • Philadelphia • Charlotte • Chattanooga • Chicago Portland, Ore. • San Francisco • Los Angeles • IN CANADA: Chemical Developments of Canada, Ltd., Montreal

ANTARA gaf



Is this it? Perhaps the very "competitive advantages" you are looking for are in this Model 10 Ring Twister by Universal. It is an advanced model for twisting all natural and synthetic yarns, spun or filament. It will give you higher production of better yarn at lower cost.

You pick your own "Pay as You Profit" Plan

Long-term lease or long-term purchase... modernization plus conservation... find out more

Your situation is what determines the Plan in the Leesona Double-Profit Service now ready for your discussion.

This Service is not a rabbit-out-of-the-hat answer to difficult operating problems . . . but a thorough, expert analysis of the factors that will help you operate more profitably.

Inquiry about the Leesona Double-Profit Service, including Profit Factor Studies does not obligate you in any way. We believe the booklet "Profit Two Ways" should be part of your current data on modern mill management. A copy is yours for the asking.

23.4.30

UNIVERSAL WINDING COMPANY

P. O. BOX 1605, PROVIDENCE 1, R. I.

Sales Offices: Boston • Philadelphia • Utica • Charlotte • Atlanta • Los Angeles

Winding and Twisting Machinery for Natural and Synthetic Yarns

Mount Hope SYSTEM

Leading Mills Cash In On Mount Hope Know-How

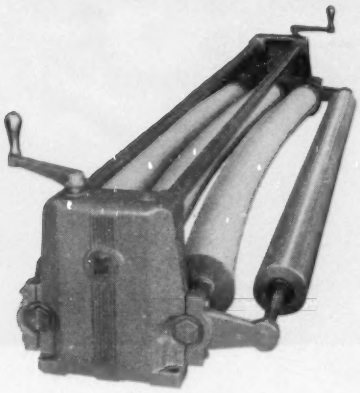
Landers' VERSILAN UPHOLSTERY

Fieldcrest

REEVES "first in functional fabrics"

PEPPERELL FABRICS

J. P. Stevens & Co. Inc.



New Multi-Bar Adjustable Expander with New Bracket

Mount Hope "Free Wheeling" Expanders — used alone or integrated with the Mount Hope System — are used by outstanding representatives of the textile industry.

For Maximum Production — Lower Cost — Minimum Seconds — use the Complete Mount Hope System

Send for Bulletins covering every cloth handling problem. Call your Mount Hope representative — or have our Production Cost Engineers survey your plant without obligation.

Riegel

Firestone

VALENCIA DAVIS & CATTERALL

Thomaston

NORTH CAROLINA FINISH

Russell

Bruck FABRICS

BACHMANN UXBRIDGE WORSTED

BRADFORD DYEING ASSOCIATION BDA U.S.A.

THOMASTON Fabrics

AMERICAN FINISHING CO.

GARZA

SMART MONEY BUYS E&W BRANDS

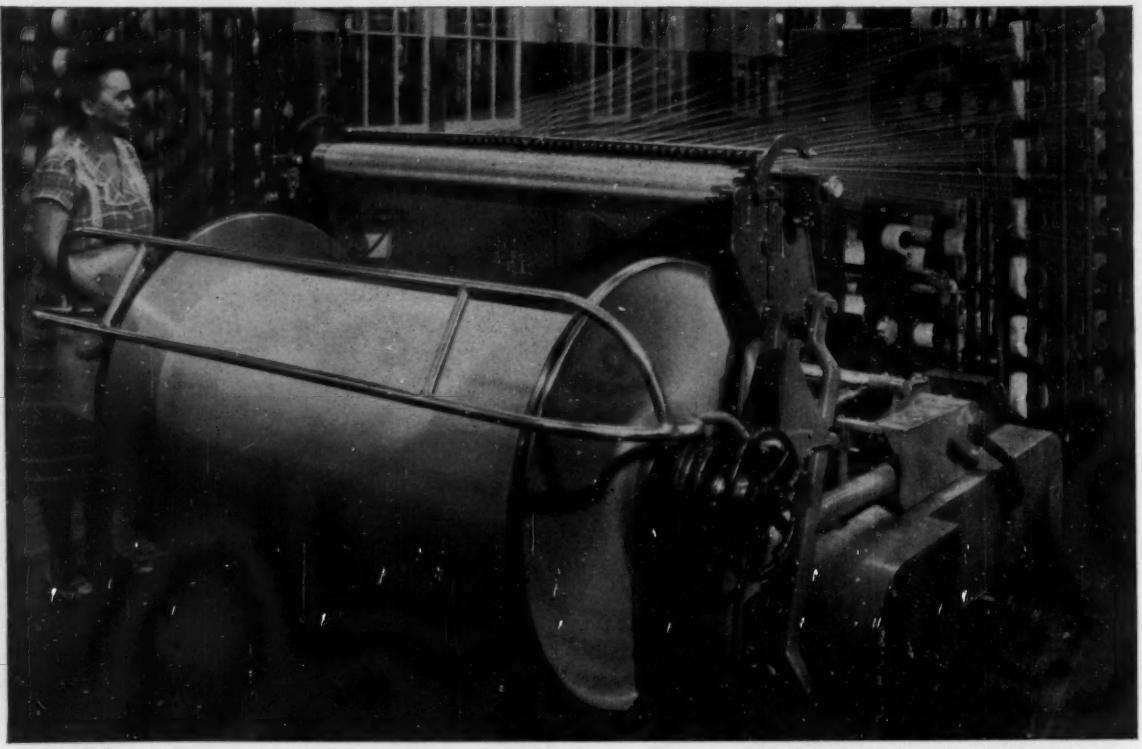
PLASTIC SuperSanitas COATED FABRIC WALL COVERING

MOUNT HOPE MACHINERY COMPANY

15 FIFTH STREET, TAUNTON, MASS.

Originator of Modern Expanders Leader in Cloth, Paper & Plastic Handling

SOUTHERN REPAIR SHOP • CHARLOTTE, N. C.



HAYES has done it again!

Here is the new giant 38" x 54½" Aluminum Section Beam for cotton and spuns! This beam, for the first time in the textile industry, is now going into leading cotton mills to *improve their efficiency, cut costs,* and *increase profits.* "Picture by courtesy of Laurens Mills, for whom Derring, Milliken and Co., Inc., is selling agency."

One of these 38" beams does the work of two 28" beams, —saving one-half the handling time.

LIGHTWEIGHT—207 lbs.

CAPACITY—Net weight of yarn 1050 lbs.

SMOOTH and TRUE-RUNNING—No splintering, no distortion due to atmospheric changes, throughout the life of the beam. Insures better warps.

BALANCE—Beam is balanced at Hayes Industries to run up to 1000 yards per minute without objectionable vibration.

REDUCES COST—You *buy* half as many beams. You *handle* half as many beams. Simple assembly for low maintenance cost should damage ever occur. Beams shipped knocked down to reduce shipping costs and storage space.

ADAPTABILITY—Fits all current types of warpers.

Send Coupon Today For Complete Information

HAYES INDUSTRIES, INC.
JACKSON, MICHIGAN

THE WORLD'S LARGEST PRODUCER OF LIGHT METAL BEAMS

Southern Representative:
R. E. L. Holt, Jr. & Assoc.
Greensboro, N. C.

New England Representative:
J. S. Fallow & Co.
New Bedford, Mass.

Eastern Representative:
J. Paul Laird
Philadelphia, Pa.

Canadian Representative:
J. S. Fallow & Co.
Montreal, Canada

HAYES INDUSTRIES, INC., Jackson, Michigan

( ) Send detailed information on the new 38" beam.

( ) Have representative call to give me data on the 38" beam.

I would specially like to know

.....

.....

Name .....

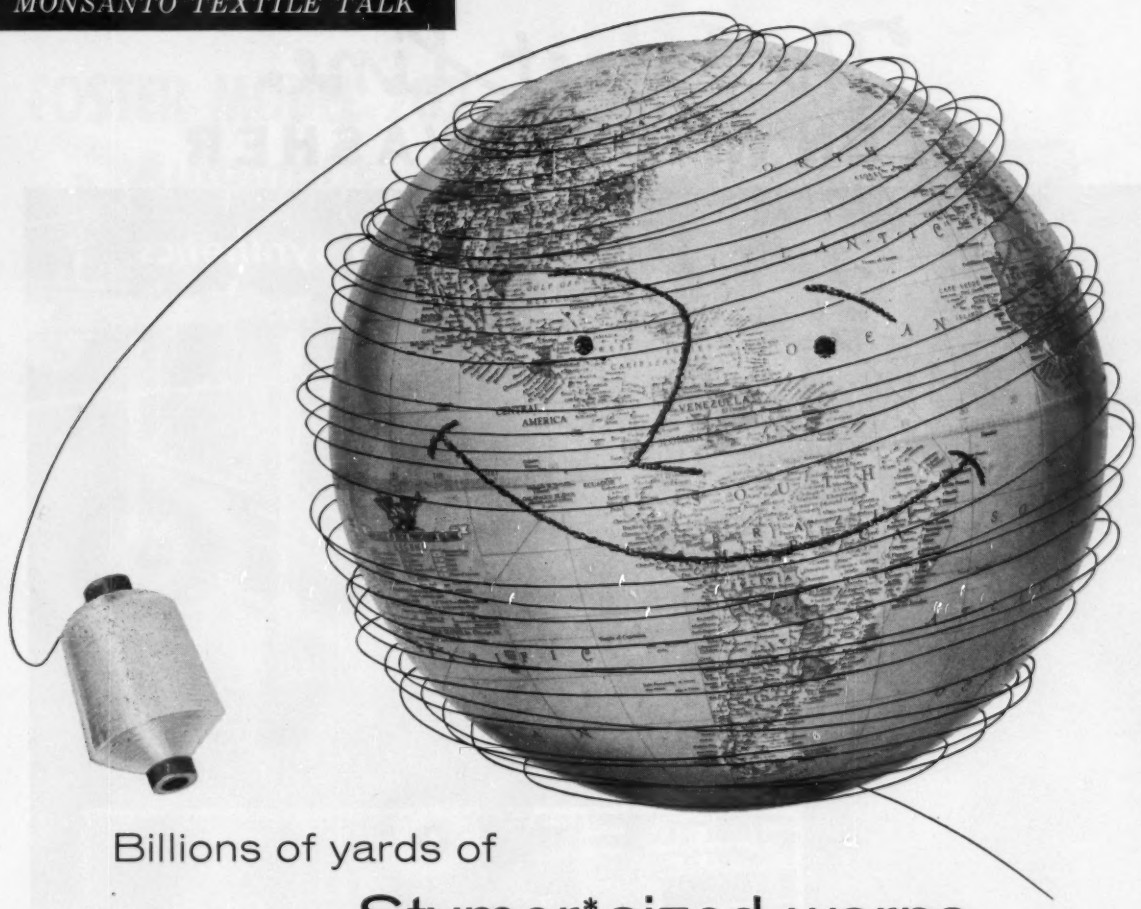
Title .....

Company .....

Address .....

City ..... State .....

MONSANTO TEXTILE TALK



Billions of yards of

Stymer* sized warps

have improved the weaving of

quality cloth!

STYMER S is the name of a special resin that Monsanto pioneered for the synthetic sizing of filament acetate yarn.

It saves time and labor, and its actual cost per thousand yards of warp is highly favorable.

The uniformity of this Monsanto resin simplifies the preparation of the sizing solution. Large mixes can be stored for long periods. Stymer S solutions are stable—will not mildew or sour.

When properly dried, Stymer sized warps separate at the lease rods with exceptional ease. This property, together with the fact that Stymer S does not gel in the size box during stops, makes it possible to lease in size.

The efficiency of weaving Stymer sized warps has been proved on bright and dull yarns, on high and low sley, on taffetas, plain weaves, twills, French crepes, tissue failles, satins, shirtings, luana, shantung, flat crepes, Bedford cords and georgettes.

Any fabric sized with water-soluble Stymer S can be stored indefinitely before de-sizing. Stymer S is easily removed by a mill scour, followed by a thorough rinsing.

Monsanto's technical staff stands ready to assist you with any sizing problems you may have. Write Monsanto Chemical Company, Plastics Division, Dept. TI-9, Springfield 2, Mass.

For efficient, uniform sizing... specify

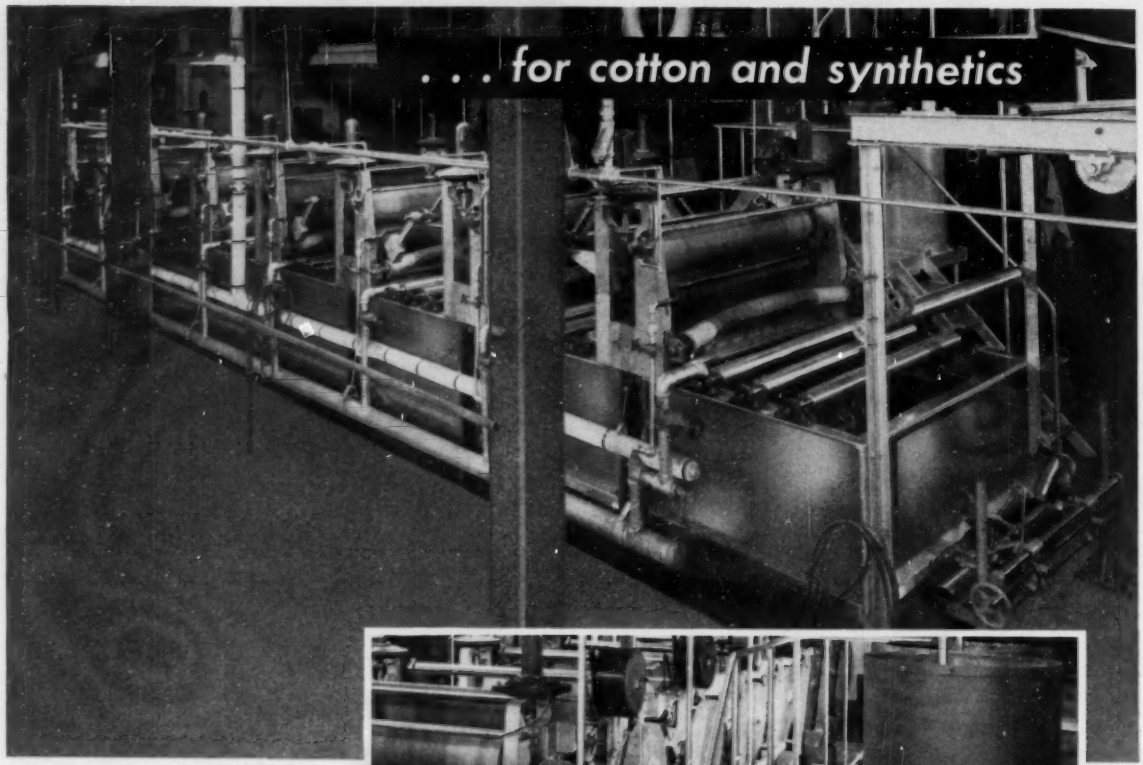
Stymer S

MONSANTO

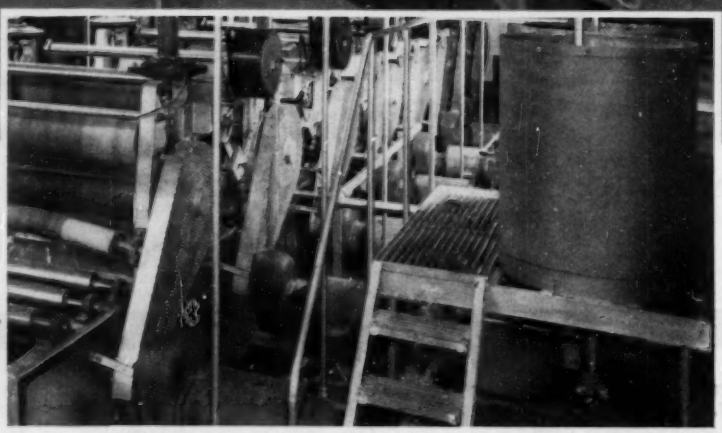
*STYMER: REG. U. S. PAT. OFF.

The Fleet Line

OPEN WIDTH WASHER



Installation of an Open Width Washer at Greenwich Printing and Dyeing Company, Inc., East Greenwich, Rhode Island.



Drive Side of Machine. Note individual drive for each bowl for variable cloth speed and synchronization from one bowl to another.

- Stainless steel self-supporting construction throughout
- Cloth speed synchronized from one bowl to another
- DC drive with infinite variable speed
- Rubber squeeze rolls with nip pressure pneumatically controlled
- Entrance rails have adjustable bars and guides
- Leaving end can be unloading doffers or folders or roll-up stands
- Supplied in any face width and number of bowls to meet requirements

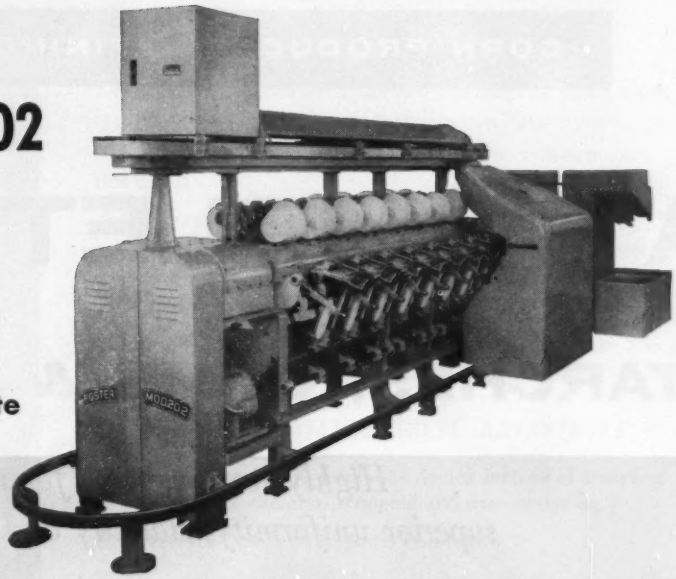
RIGGS AND LOMBARD, INC.

FOOT OF SUFFOLK STREET, LOWELL, MASS.

Agents: Paul A. Merriam Company, P. O. Box 86, Providence, R. I. • Albert R. Breen, 80 E. Jackson Blvd., Chicago 4, Ill. • Larry T. Nelson, Portland, Ore. • F. W. Warrington Co., 611 Johnston Bldg., Charlotte, N. C. A. Harold Zayotti, Jr., P. O. Box 125, Riverton, N. J. • H. E. Mott Co., Limited, Brantford, Ontario, Canada

FOSTER MODEL 202
Automatic
CONE WINDER

Operator Can Handle
Up to 22 Bobbins per Minute



Operator drops full bobbin in chute.

Operator catches loose end in clip.

This means that with this machine you can produce 100% to 300% more poundage than with the most efficient non-automatic winder, the degree of increase depending on the type and count of yarn.

And you end up with cones that are suitable for knitting — identical in this respect with the well known Foster Model 102 cone. No other automatic cone winder can produce cones of such quality.

The illustrations herewith show how work for the operator is tremendously reduced. Her only duties, other than those shown here, are to don and doff cones and thread up new ones.

This is only part of the story. Get ALL the facts. Send for Bulletin A-100.

FOSTER MACHINE COMPANY
A Winder for Every Textile Purpose

Westfield, Massachusetts, U.S.A.

Southern Office — Johnston Bldg., Charlotte, N. C. • Canadian Representative — Ross Whitehead & Company, Limited, 1475 Mountain St., Montreal, Que. and 35-37 King St. W., Toronto, Ont. European Representative — Muschamp Textile Machinery, Limited, Keb Lane, Bardsley, Oldham, England.

CORN PRODUCTS REFINING COMPANY

presents

A COMPLETE LINE

of

STARCHES, GUMS & DEXTRINES

Highly recommended for their superior uniformity, stability and cleanliness

GLOBE® BRAND CORN STARCHES

Ideal where a thick boiling starch is required for use in homogenizers. Globe Pearl Corn Starches produce strong films, reducing breaks on the slasher and on the loom. Globe brand extra thick starches produce a smooth, lardy paste.

GLOBE® GUMS AND DEXTRINES

Preferred for warp sizing spun rayon, spun rayon blends, and synthetics; warps desize readily.

TEN-O-FILM STARCHES

A new line of starch derivatives, similarly applicable, which are gaining wide use where set-back is a factor in the size operation.

EAGLE® BRAND CORN STARCHES

For warp sizing carded and combed yarns. These popular thin boiling starches are available in all fluidities necessary to maintain correct size concentration for best possible weaving.

HERCULES BRAND CORN STARCHES

Used in a variety of sizing applications. These oxidized starches produce a smooth but tough, clear film. Their strength and uniformity help reduce breakage on the loom, cut down shedding.

TAKE ADVANTAGE of our free technical service. Our lab and field experts will welcome the opportunity to help you with actual production problems. Write us today.

CORN PRODUCTS REFINING COMPANY • 17 Battery Place, New York 4, N. Y.

To Insure LEVEL DYEING ...Add NOPCO® 1425-B

AND SUBTRACT 15% to 85% FROM YOUR COST!

No more streaky shades! From now on, you can count on turning out *uniformly* the exact shades you have chosen.

You can use Nopco 1425-B in either of two ways to get this result:

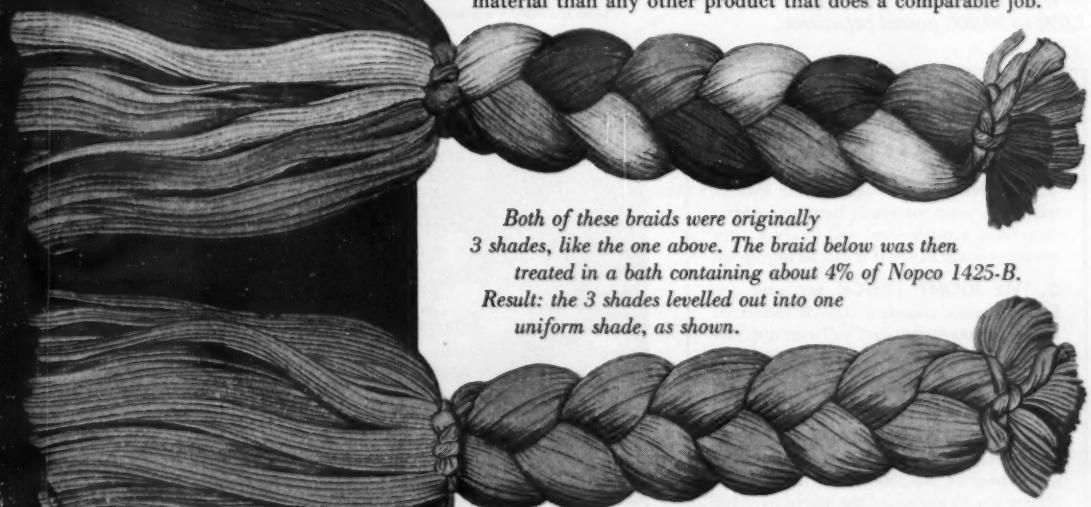
As a preventive. By adding a very small amount (0.25% to 1%) of Nopco 1425-B to the dyebath, you promote level dyeing by controlling the rate of dye absorption by the fiber. This of course is the preferred method.

As a corrective. Somewhat larger amounts (2% to 5%) of Nopco 1425-B may be used to correct streaky or overdyed shades.

NOPCO 1425-B OFFERS THESE ADVANTAGES:

1. More economical. It levels the dyeing instead of resorting to expensive chemical stripping and then re-dyeing.
2. Preserves tensile strength; is non-felting.
3. Does not require re-dyeing—merely re-shading in same bath.
4. Eliminates any danger of machine corrosion.
5. Results in greater leveling and stripping of colors, and the resulting bottom shade is generally cleaner than that obtained from chemical stripping.

In addition to the *big* savings here, resulting from the elimination of stripping and re-dyeing, there is the further striking fact that Nopco 1425-B costs from 15% to 85% less per pound of active material than any other product that does a comparable job.



Both of these braids were originally 3 shades, like the one above. The braid below was then treated in a bath containing about 4% of Nopco 1425-B. Result: the 3 shades levelled out into one uniform shade, as shown.

You'll want to know more about Nopco 1425-B—
and a Nopco representative will gladly work with you to obtain best results. Write today.

NOPCO
EVOLVED THRU RESEARCH

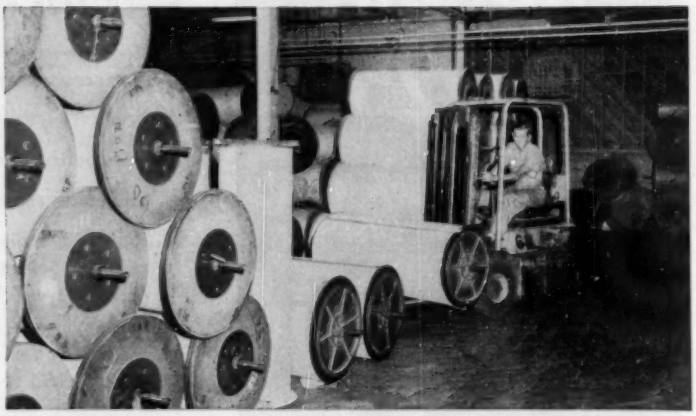
NOPCO
CHEMICAL COMPANY
Harrison, New Jersey
PLANTS: Cedartown, Ga. • Richmond, Calif. • London, Ont., Canada

HYSTER®

PLANNED MATERIALS HANDLING SAVES TIME AND MONEY in textile mills

Here are typical examples of how Hyster Industrial Trucks are helping to make *tremendous* savings in materials handling costs in *textile mills.*

Whether you are now using lift trucks, or haven't ever used industrial trucks of any kind, your Hyster Dealer is ready to help you achieve cost reductions. Because he keeps abreast of the materials handling problems and improvements, he has helped many textile mills realize more profit from their operations. *Why not call him today* and take advantage *of his specialized services? Materials Handling Trucks from 1,000 to 30,000 pound capacities.*



LOOM BEAMS must be transported to other plants. Here a beam is being removed from the temporary storage to waiting transport truck.

HYSTER DEALERS GIVE YOU ALL 3

1. PLANNING. Your Hyster Dealer will plan your materials handling operation from scratch—or will analyze your present system to see if it can be improved.

2. THE RIGHT TRUCK for *your* job from Hyster's complete line of industrial trucks (1,000-30,000 lbs) and over 100 job-attachments.

3. THE RIGHT SERVICE—ample spare parts stock, shop facilities, factory-trained mechanics and an efficient field service that keep your Hyster lift trucks going on your job, wherever your job might be located. Hyster trucks are noted the world over for their low downtime.

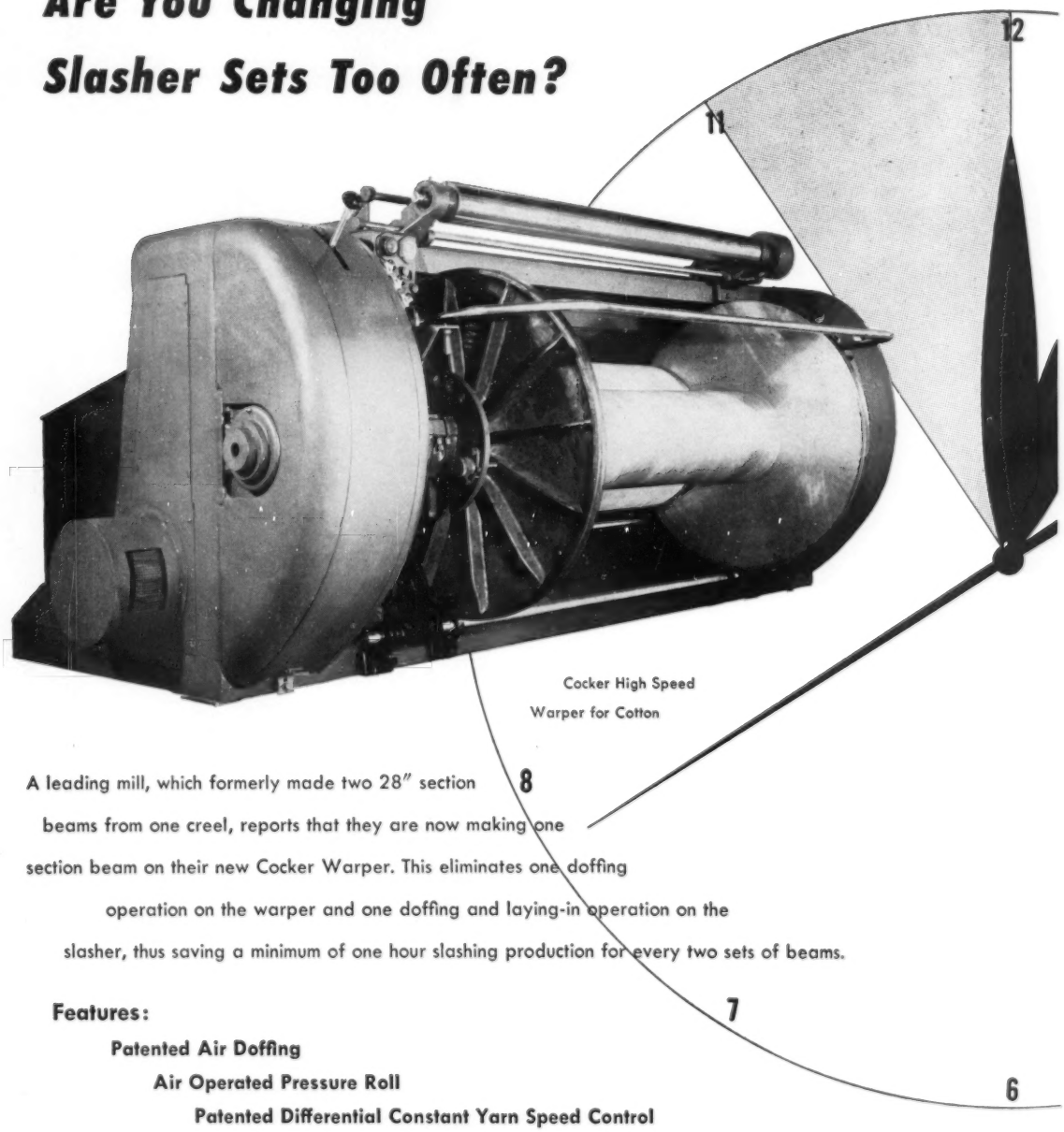
BOTH THE QN-20 AND YT-40 with Load-Grab®, 4,000 lb. capacity unit, team up to make use of valuable "free air space". Note the YT-40 handling three bales stacking five high.

HYSTER COMPANY

2902-57 N. E. Clackamas.....Portland 8, Oregon
1010-57 Myers Street.....Danville, Illinois
Hyster N.V. .....Nijmegen, The Netherlands

FOUR FACTORIES: Portland, Oregon; Danville, Illinois; Peoria, Illinois; Nijmegen, The Netherlands.

Are You Changing Slasher Sets Too Often?



Cocker High Speed
Warper for Cotton

A leading mill, which formerly made two 28" section beams from one creel, reports that they are now making one section beam on their new Cocker Warper. This eliminates one doffing operation on the warper and one doffing and laying-in operation on the slasher, thus saving a minimum of one hour slashing production for every two sets of beams.

Features:

Patented Air Doffing
Air Operated Pressure Roll
Patented Differential Constant Yarn Speed Control
Rheostat Control of Operating Speed
Individual Braking of Beam Pressure Roll and Carrier Roll by Rheostat Control
Practically Vibrationless at Speeds up to 1000 Yards per Minute
Takes Beam Flange Diameters up to 40 Inches.

Write or wire for full information.

THE LEADER
COCKER
AROUND THE WORLD

Machine and Foundry Co., Gastonia, N. C.

WORLD'S LARGEST DESIGNERS AND BUILDERS OF COMPLETE WARP PREPARATORY EQUIPMENT

A NEW STANDARD OF QUALITY

CIBANONE VAT DYES "MICROFINED"*

...for improved performance—have established a new standard of quality on the American market.

The physical condition of these superior vat dyes—exemplified by superfine and uniform particle size and perfection of dispersion—is translatable into added money value under plant conditions—trouble-free continuous runs—reduction of specking on light-colored goods—better penetration of tightly-woven materials—fewer seconds—more profit.

The best salesmen for the "Microfined" vat dyes of CIBA are enthusiastic customers who have lowered their costs and enhanced the quality of their production by joining the ever-growing demand for the CIBANONE® dyes—the best vat dyes—"Microfined"—to make them better yet.

*Trade name

BEST VAT DYES
ibanone
ICROFINED
ST VAT DYES
banone
ROFINED
VAT DYES
none
FINED
CIBA
Makers of the
world's finest dyes

Step Up Roll-Loading Efficiency

...and Cut Costs!...with Foxboro Stabilflo* Pneumatic Loading

Unmatched for operating efficiency and economy at low initial cost! That's the Foxboro #8D Stabilflo Air Motor... your best choice for roll loading on padders, mangles, quetsch boxes, and other equipment requiring moderate roll separation.

Stabilflo is an air-to-load, spring-to-lift diaphragm motor. Normally connected direct to top roll bearing without levers, it practically eliminates friction. No pressure seals or stuffing boxes. No air leakage. Easy to install. Typical installations have operated for 5 years without attention.

100 sq. in. motor diaphragm, with wide choice of totally-enclosed coil springs, permits roll loads from less than roll weight up to 10 tons.

Write for details on this and other sizes of Stabilflo Air Motors, and on other Foxboro Pneumatic Roll Loading Systems. **The Foxboro Company, 489 Neponset Ave., Foxboro, Massachusetts, U.S.A.**

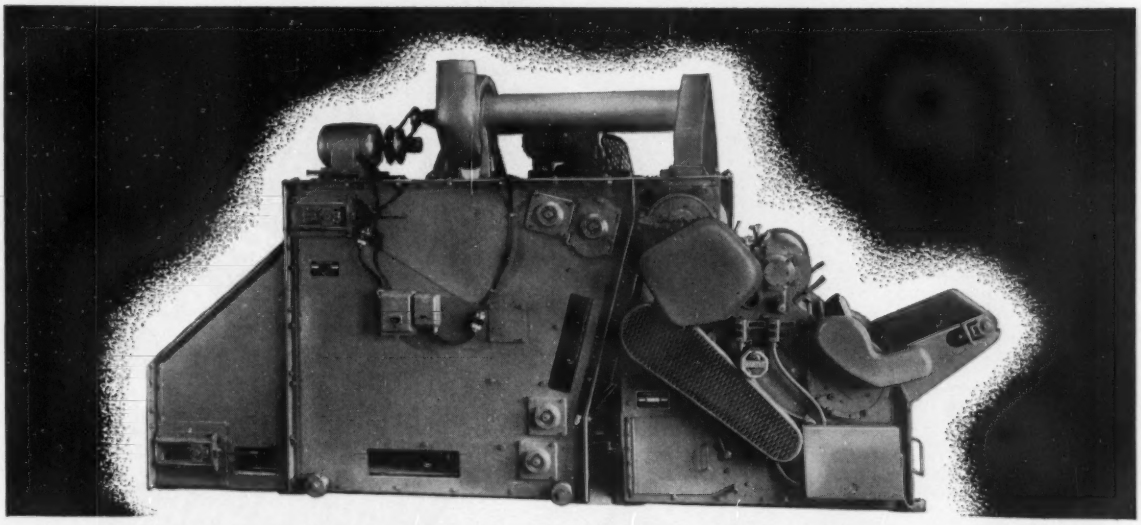
*Trade Mark

Typical application of Foxboro Stabilflo Air Motor. Note splashproof design. Compact control panel delivers regulated air to Stabilflo Motor mounted at each end of roll . . . permits easy duplication of uniform loading at any time.

FOXBORO
REG U.S. PAT. OFF.

PNEUMATIC ROLL LOADING

FACTORIES IN THE UNITED STATES, CANADA, AND ENGLAND



FOUR YEARS OF ACTUAL MILL PERFORMANCE DEVELOPED THE

NEW, IMPROVED MODEL 40B

RANDO-FEEDER | RANDO-WEBBER

NEW — **ENLARGED HOPPER** . . . full 50-cubic foot capacity.

NEW — **FLOOR APRON** gives even pressure of fiber on elevating apron. Speed readily adjustable.

NEW — **STRIPPER APRON** returns excess fibers to rear of hopper. No Feeler Plate or Start-Stop actions.

NEW — **ROTARY CONDENSER SCREEN BOX.**

IMPROVED — **SELECTIVE OUTPUT CONTROL** . . . unaffected by wide range in hopper level.

NEW USES — **BLENDING AND BLENDING LINES.**

COMPLETELY NEW — **DESIGN AND CONSTRUCTION** . . . same principles and functions.

IMPROVED — **PERFORMANCE** . . . product and output efficiency.

IMPROVED — **MAINTENANCE** . . . heavier motors and drives—readily accessible.

NEW — **DOUBLE DRIVE ROTARY CONDENSER** . . . interchangeable with Feeder Condenser . . . minimum spares needed.

NEW — **AIR CHAMBER** design for improved web uniformity. Large accessible clean-outs.

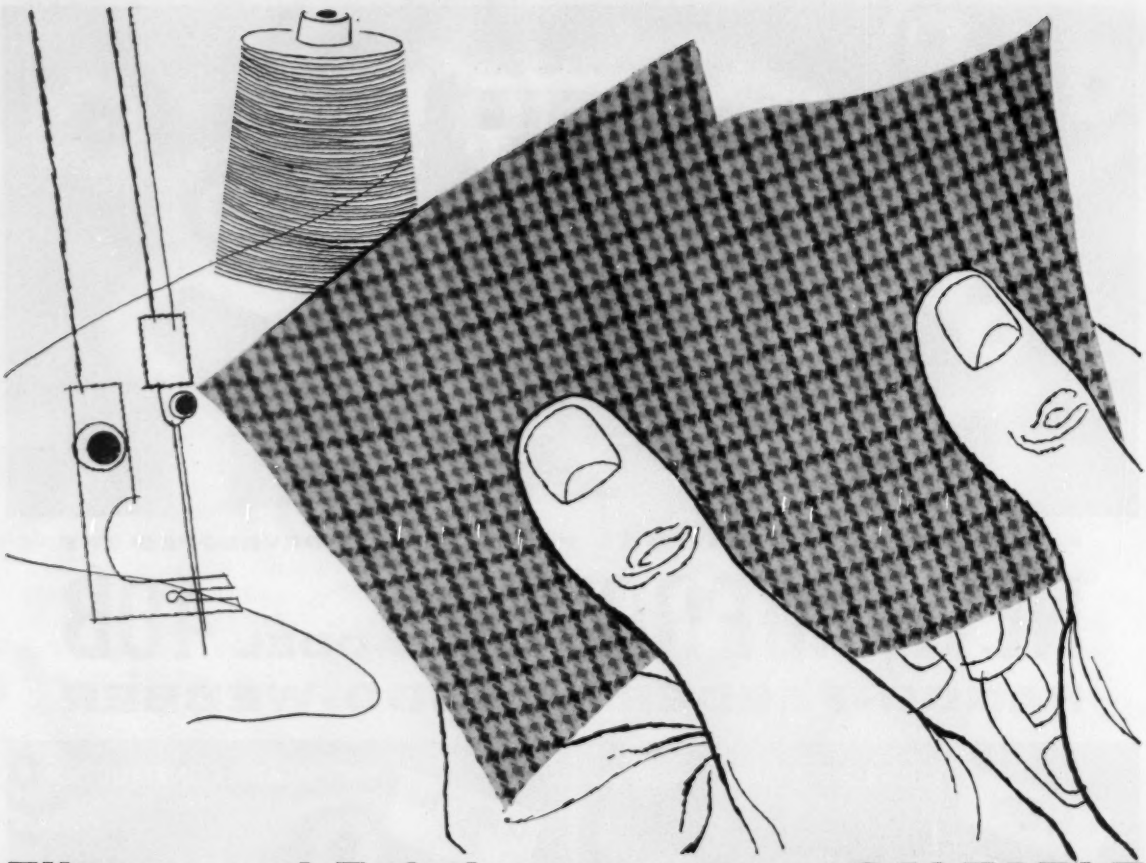
Rando-Feeders and Rando-Webbers have produced thousands of yards of random webs in around-the-clock production. Four years of proven performance. The same basic design today but new features . . . new versatility . . . improved performance. Available in 3 sizes: 40", 60" and 84". Inquiries are invited. Bulletin available.

TEXTILE DIVISION

CURLATOR

CORPORATION

EAST ROCHESTER, NEW YORK



Fibers and Fabrics are more SALEABLE

Processing is SMOOTHER

when you use . . . Profine

One of the most important advantages of Profine is its ability to make all types of fibers and fabrics easier to handle.

As top dressing for resin finished fabrics, Profine imparts superior abrasion resistance, provides excellent lubricity, improves sewing properties, and improves hand.

In back-filling, Profine improves the feel of cloth, provides cutting and sewing lubricity, and reduces dusting.

Treated with Profine, *cotton knitting and weaving yarns,* industrial sewing threads, and wool blend knitting yarns are more supple . . . easier handled.

Profine improves the "sewability" of fabrics . . . Minimizes fusing, needle holes and cut threads . . . facilitates high-speed cutting and sewing.

As a napping assistant, Profine gives you a softer, loftier nap . . . often reduces the number of naps previously necessary.

On knit goods, Profine lessens the tendency for edges to curl during rolling, cutting and sewing. Effectively lubricates yarn for knitting.

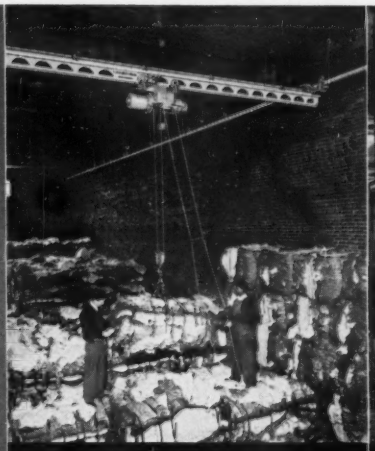
As a sewing assistant on nylon tricot, Profine is tops.

Profine is helping many a textile processor turn out better finished, more saleable fibers and fabrics. There's a good chance that Profine can help smooth out processing operations in *your* mill.

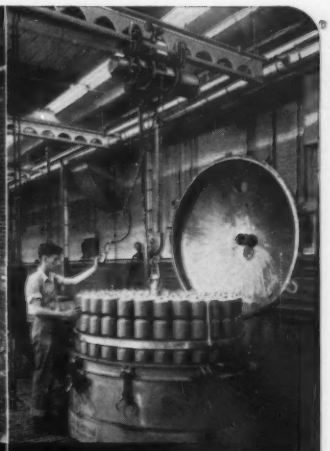
PROCTER & GAMBLE Textile Finishes Sales Dept. • Gwynne Building, Cincinnati 2, Ohio

Makers of Olate, Proxol, Kyro and Orvus Products

TO CUT OVERHEAD GO OVERHEAD with CLEVELAND TRAMRAIL

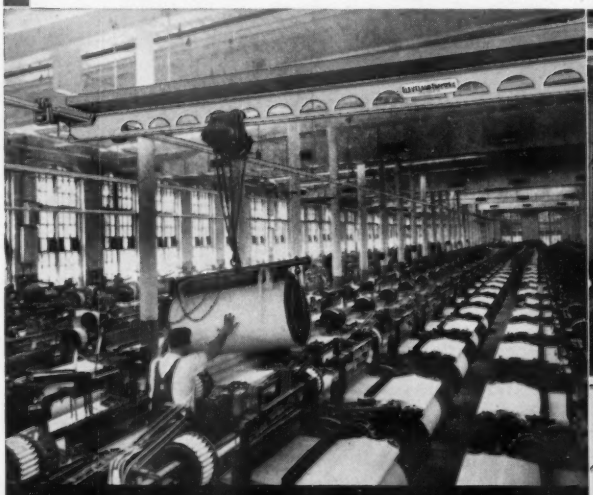


BALE HANDLING—Pile them higher, easier. Store more. Save aisle space.

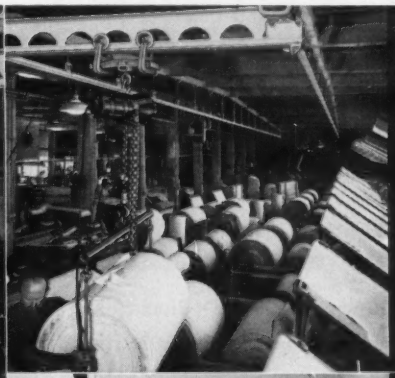


PACKAGE DYEING—Heavier loads with more packages quickly handled by one man.

Are you enjoying the many benefits that Cleveland Tramrail material handling equipment can provide? Hundreds of textile mills, large and small, are. We know of no other equipment that pays for itself so quickly. Why not get the facts? A Cleveland Tramrail representative will be glad to discuss textile handling with you, without obligation, of course.

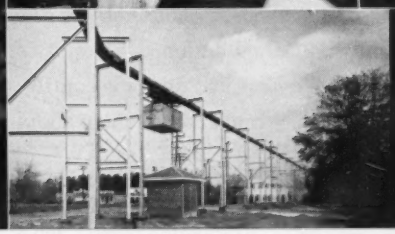


BEAM HANDLING—Handle larger beams, faster. No floor interference. Space looms closer.



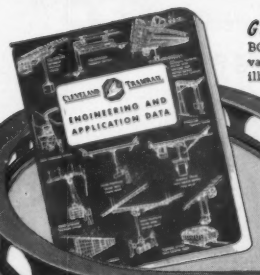
CLOTH HANDLING

Use floor area for production, not aisleways. Cut cloth handling time.



AUTOMATIC DISPATCH

Deliver materials between floors or buildings automatically. Cut costs.



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OVERHEAD MATERIALS HANDLING EQUIPMENT

*A **cure**, not a treatment, for Pollution Problems . . .*

This is the first in a series of advertisements based on a technical paper by B. W. Dickerson, Sanitary Engineer, Hercules Powder Company. A complete copy of the report or additional technical data on CMC Warp Size can be obtained by writing directly to Hercules.

If finishing mill wastes cannot be dumped into nearby waters in their present form and the cost of treatment is prohibitive, what is the answer? Many waste engineers have found that going to the source of the trouble can correct the situation and eliminate the need for a large capital expenditure for sewage plant facilities.

In a typical finishing plant, a percentage breakdown of the BOD (Biochemical Oxygen Demand) shows that the desizing operation is the obvious "villain". Up to 60 per cent of BOD pollution is a result of desizing, with dyeing and finishing contributing 30 to 40 per cent and bleaching about 10 per cent.

Years of preliminary study, followed by actual use on a production scale, have demonstrated that the introduction of proper amounts of CMC Warp Size in the sizing formulation can cut desizing pollution by as much as 75 to 85 per cent. Such a reduction of pollution would permit many mills to conform to abatement regulations without the need for construction and operation of a waste treatment plant. For mills with more severe pollution problems, the use of CMC Warp Size can reduce the cost and operating expense of treatment units as much as 50 per cent.

Formulations composed of two parts starch and one part CMC Warp Size provide adequate sizing at 6 to 8 per cent add-ons. In many instances, this much lower add-on will reduce the amount of water required in desizing by as much as 50 per cent. The presence of water soluble CMC Warp Size in the formulation can eliminate the need for the use of enzymes, greatly speeding and simplifying the desizing process.

VC55-5

Virginia Cellulose Department

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INCORPORATED

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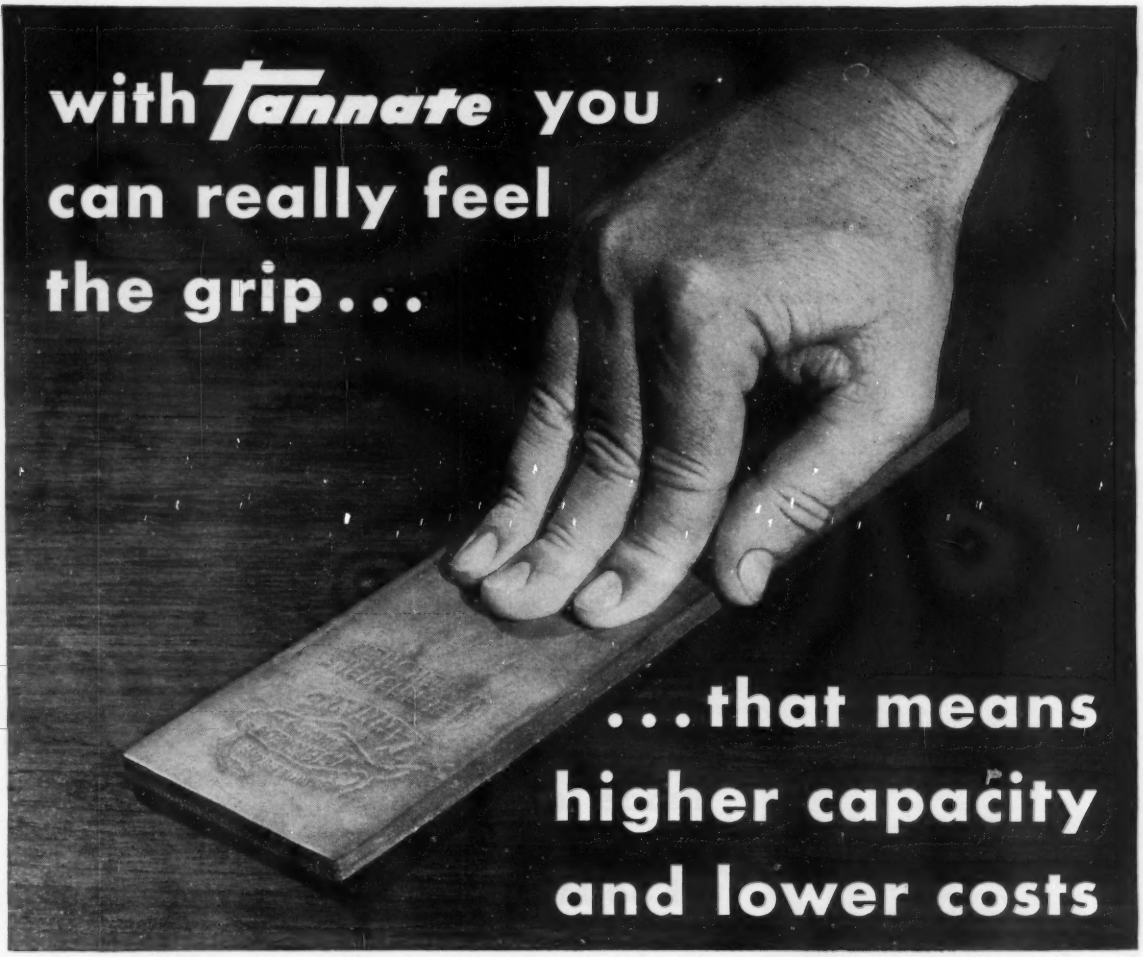

Take a piece of Tannate Leather Belt and compare its grip with any ordinary Belt.

Place this sample (we'll be glad to furnish you one) on your desk. Press down firmly as you slide it along and see how well it grips. This same glove-like grip means extra capacity on your drives. As you know, extra capacity usually means additional production, longer life, and less maintenance. This is just one of the many features that are the result of Rhoads special tannage . . . a tannage combining in one belt all the qualities most important for flat belt transmission of power.

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Please send me a sample of Tannate Belt. No obligation, of course.

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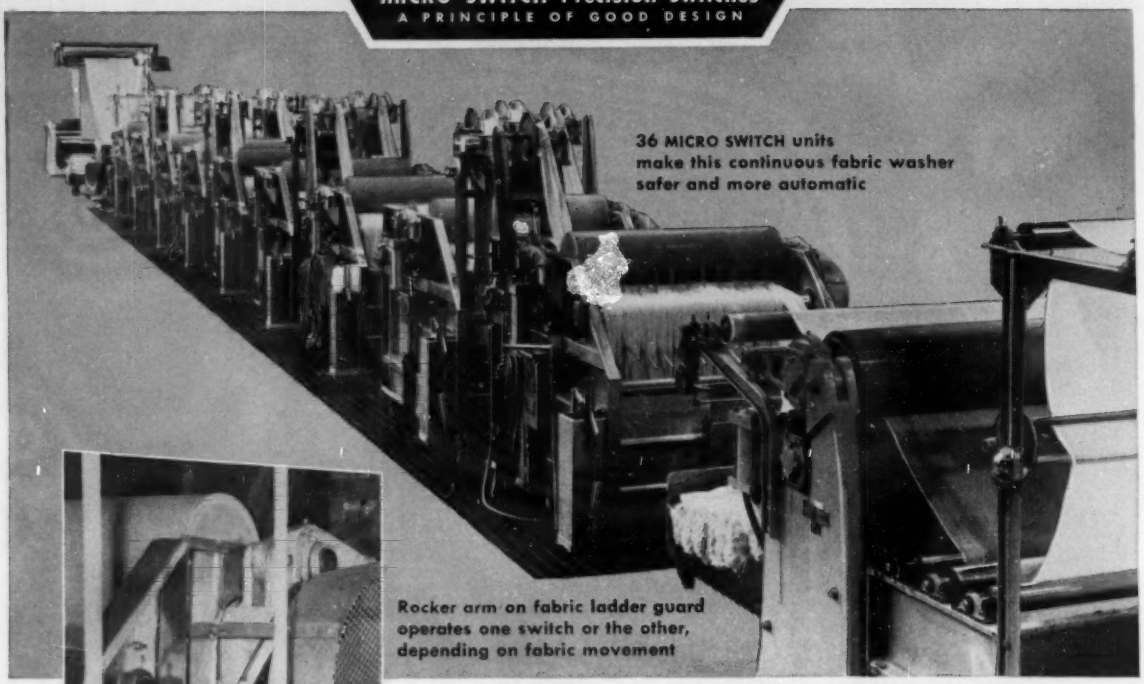
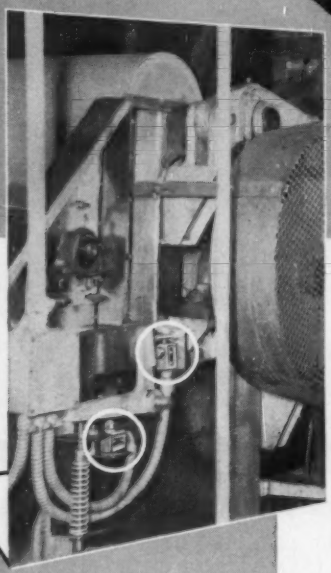
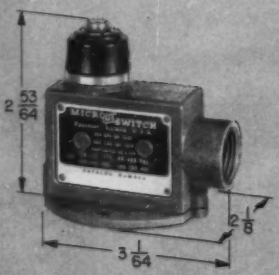
A PRINCIPLE OF GOOD DESIGN



36 MICRO SWITCH units make this continuous fabric washer safer and more automatic



Rocker arm on fabric ladder guard operates one switch or the other, depending on fabric movement



Sealed plunger switch protects contacts from dirt and moisture

High speed fabric washer made faster... safer... more automatic ... with help of 36 MICRO SWITCH switches

• Four MICRO SWITCH precision switches on each of these nine tubs provide safety shut-offs to prevent accidents to operators and materials. The Laxloop Continuous Washer, a product of Riggs and Lombard, is an exceptionally efficient machine for high speed washing of all types of fabrics.

The four switches are located at strategic points so that any tie-up, tangle or other malfunction will instantly result in stopping the machine before any damage may occur. In addition, the switches operate a light on the control board to show the exact trouble spot.

Riggs and Lombard engineers selected MICRO SWITCH precision switches because they could be operated with a minimum of travel, were positive and dependable in action and sufficiently enclosed to be resistant to moisture.

MICRO SWITCH products can make your equipment safer and more automatic, too. The switch you require may need entirely different characteristics than the ones shown here. Whatever your switch problem, MICRO SWITCH engineering service can cooperate with you and your design staff in a way to save time and money. Why not call your MICRO SWITCH branch office today?

A complete line of snap-action and mercury switches

MICRO SWITCH provides a complete line of extremely reliable, small-size, high-capacity, snap-action precision switches and mercury switches. Available in a wide variety of sizes, shapes, weights, actuators and electrical characteristics. For all types of electrical controls.

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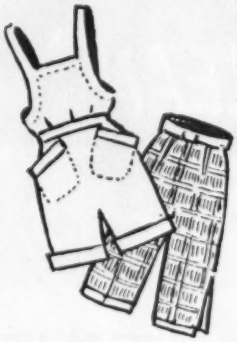
(U. S. Patent Nos. 2,516,632; 2,516,633; 2,516,634)

for permanent finishing, use these new starch ethers with resins



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***ginghams!....**
***sail cloth!....**
***and a *host* of other fabrics!**

PENFORD FINISHING GUMS*—highly chemically substituted starch ethers—in combination with urea formaldehyde and melamine resins—provide *lasting* results!

Get
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****lasting* crush-resistance and dimensional stabilization!**
***highest breaking strength and abrasion resistance!**

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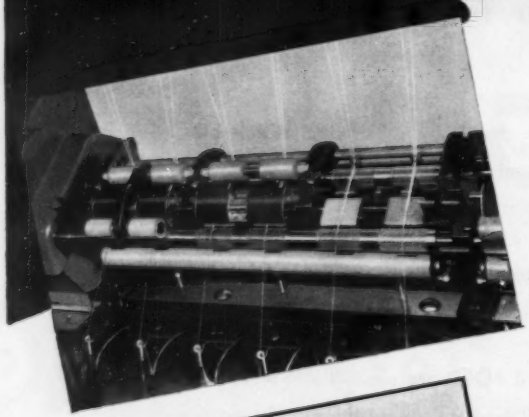

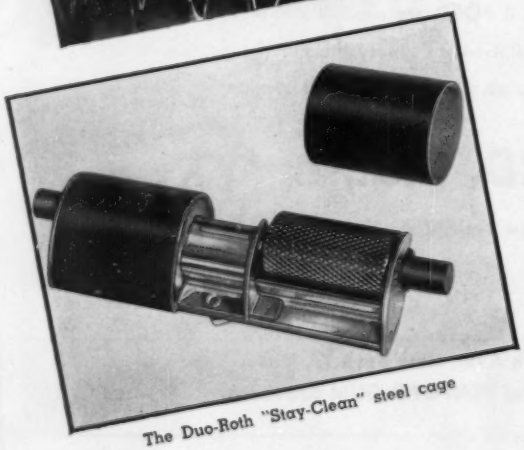

The Duo-Roth "Stay-Clean" steel cage

FRONT ROLL
A new self-aligning, center suspended, Saco-Lowell anti-friction front roll held in a Dixon saddle guide, which eliminates the front cap bars, assures perfect alignment at all times of the front top roll with the bottom steel roll. The advantage of this perfect alignment is better drafting and prolonged life of the top roll covering as has been so successfully demonstrated on the over-1000 Gwaltney frames now in operation.

MIDDLE ROLL
Mill tested Duo-Roth assembly with anti-friction middle roll. Has sealed-in lubricant which eliminates danger of spoiling top or bottom apron with oil and friction drag. The rugged, steel cage is a precision product. Simple means are provided to accurately adjust the clearance between the aprons for the optimum in fibre control.

BACK ROLL
Solid back roll with Nylon gudgeons and a saddle with Rulon bearings. Roll never needs oiling — needs but little cleaning.

RANGE OF DRAFTS
The ability of the "Duo-Roth" Drafting System to give increased drafts ranging from 60 to 100% over current standards and at the same time produce stronger and more uniform yarns has been demonstrated on thousands of spindles in quality-minded mills throughout the world.

AVAILABILITY
The Duo-Roth "Stay-Clean" drafting system can be supplied with new spinning and as a changeover for frames now equipped with Roth spinning.

For further information or a demonstration, contact the nearest Saco-Lowell Sales Office.

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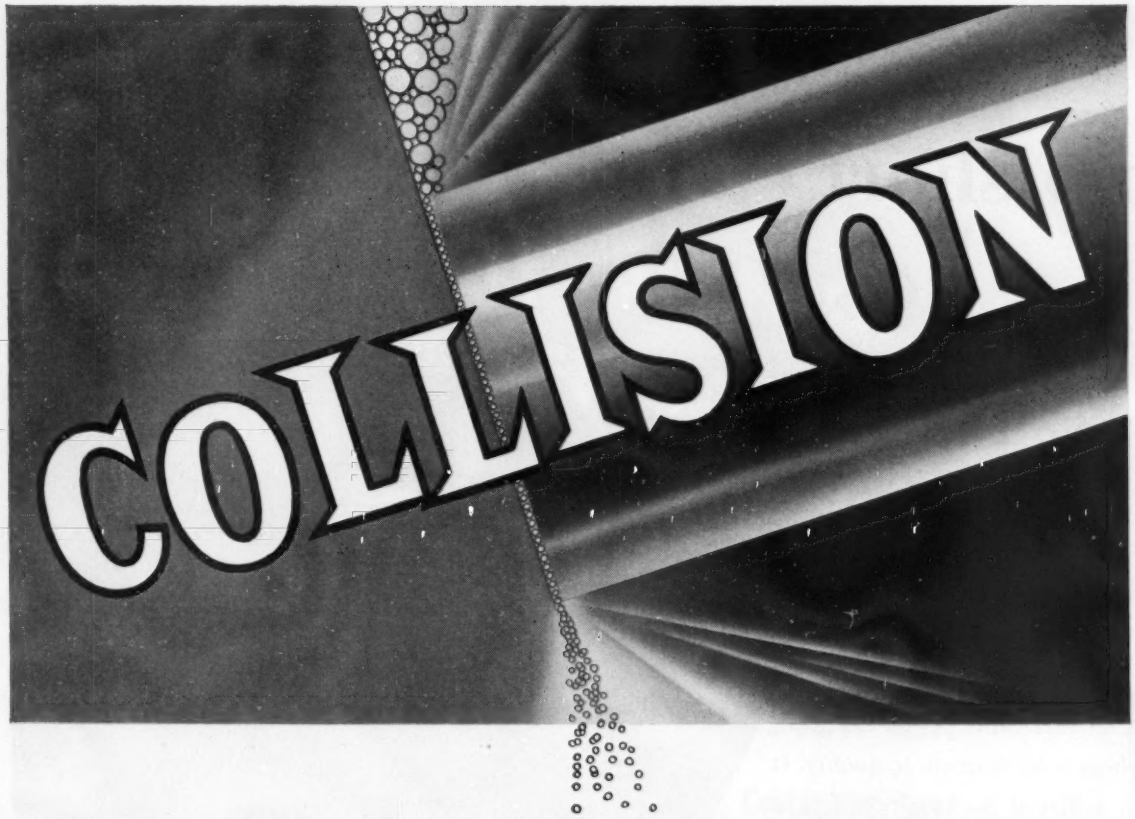


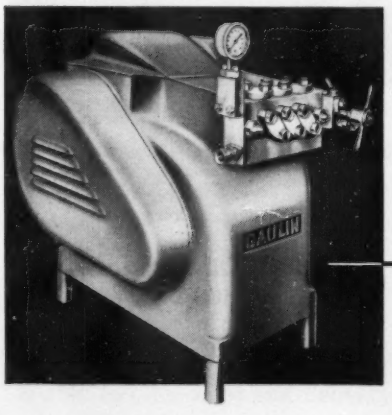
Converts size particles more uniformly in a Gaulin Homogenizer

Here's why hundreds of mills prefer Gaulin Homogenized size. They find the mechanical conversion of size by a Gaulin is faster, more thorough, and less expensive than old fashioned cooking methods.

A Gaulin pumps size at tremendous velocity through a microscopic orifice. Size particles collide, expand and explode . . . break up into a uniformly finer mixture instantly . . . give you a closer viscosity control.

The result? Mills find they can switch to Pearl Starch. Most report a decided improvement in the quality of their warp yarn. They save on starch, steam and supervision . . . make less hard size . . . and can store Gaulin-Homogenized size as long as 48 hours.

We'll be glad to install a Gaulin Homogenizer for you on a guaranteed-performance basis. Whether you're making cottons, worsteds or synthetics, write for information.



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Gaulin

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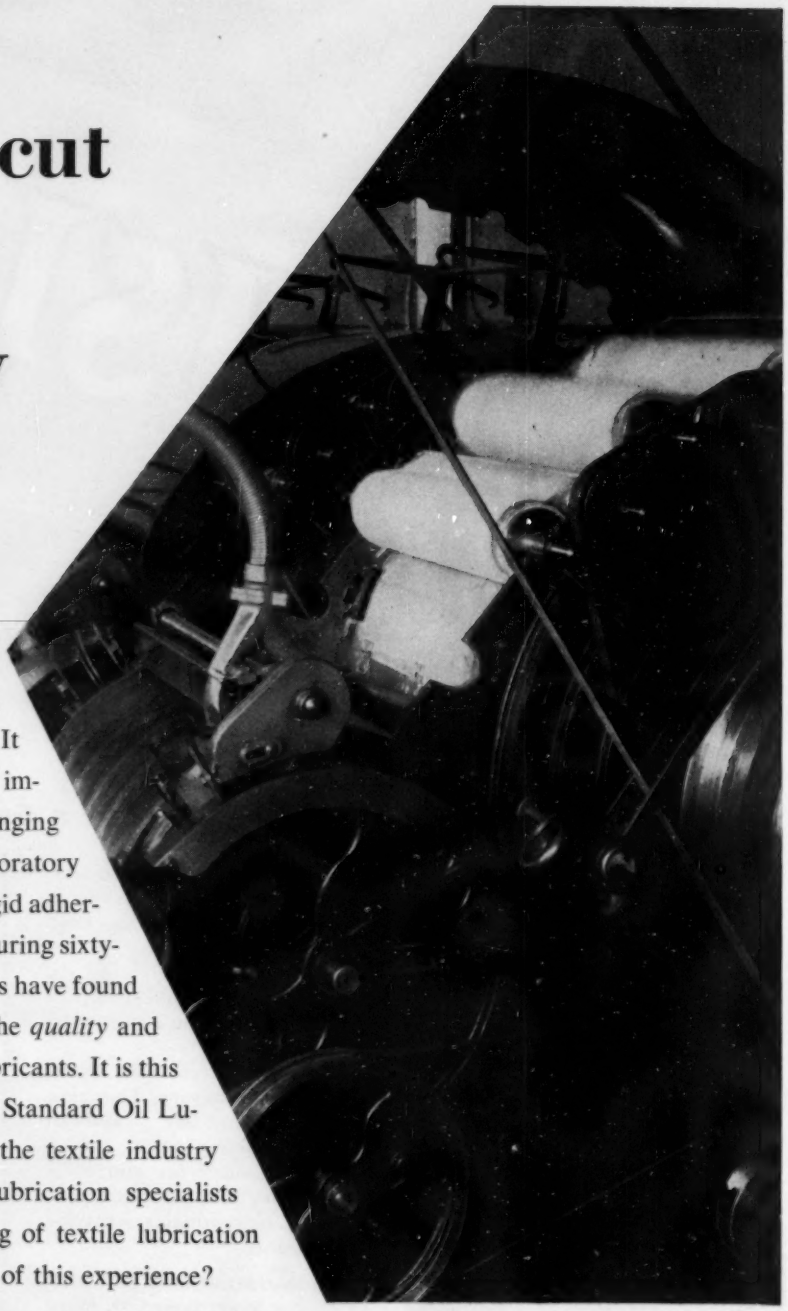
WORLD'S LARGEST MANUFACTURER OF HOMOGENIZERS, TRIPLEX STAINLESS-STEEL HIGH PRESSURE PUMPS, AND COLLOID MILLS

no short cut to quality



In the production of industrial lubricants, as of textiles, there is no short cut to *quality*. It is achieved by long research, improving each product to fit changing machinery needs, constant laboratory control to assure uniformity, rigid adherence to proven formulae. . . . During sixty-nine years' use, textile engineers have found that they can always rely on the *quality* and *uniformity* of Standard Oil Lubricants. It is this dependable quality that keeps Standard Oil Lubricants *first* in popularity in the textile industry throughout the South. Our lubrication specialists have a practical understanding of textile lubrication needs. Why not avail yourself of this experience?

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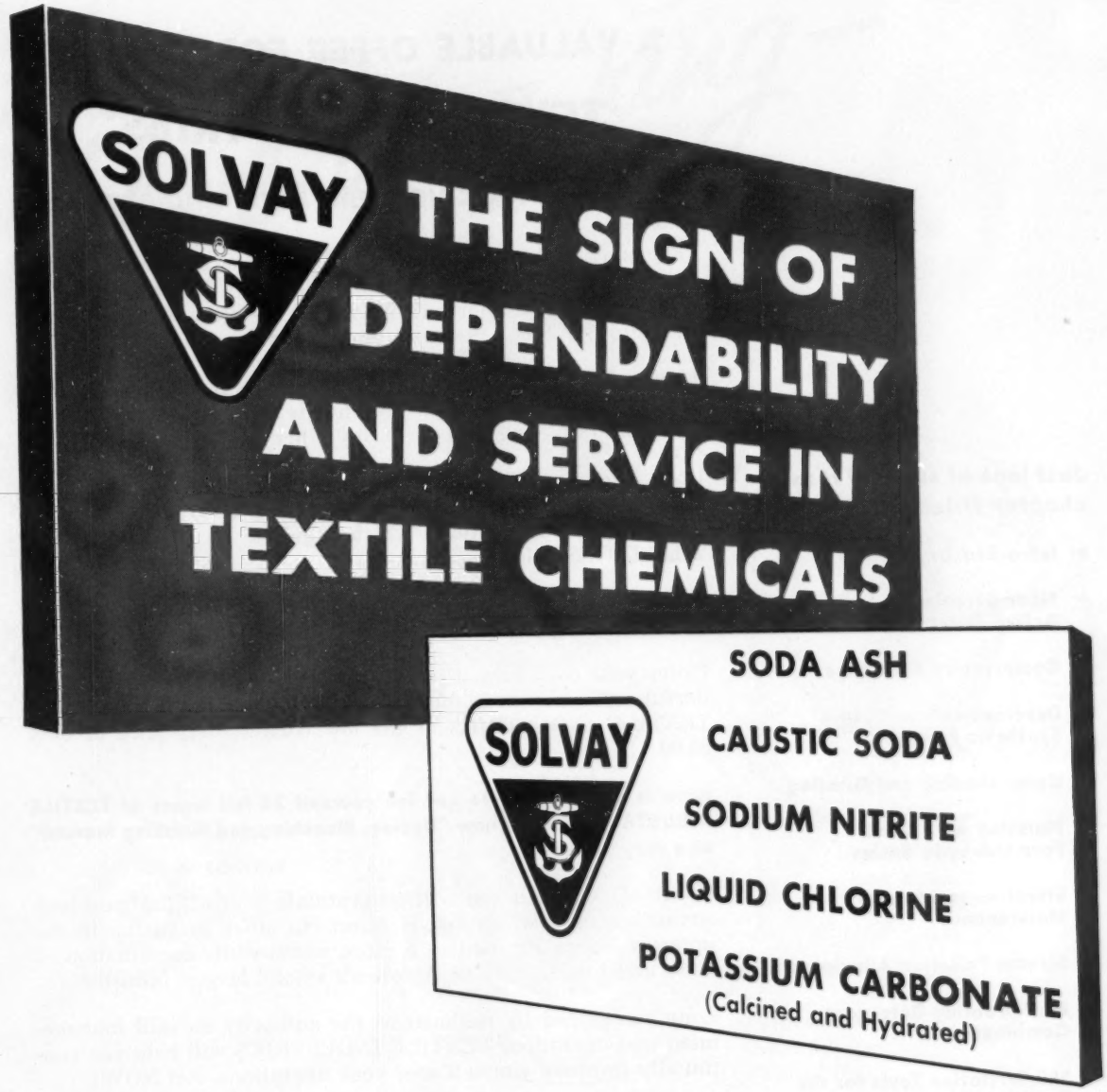

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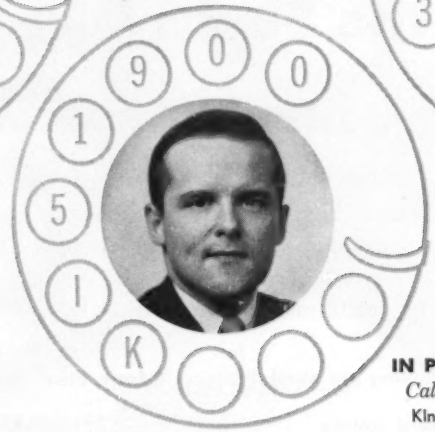

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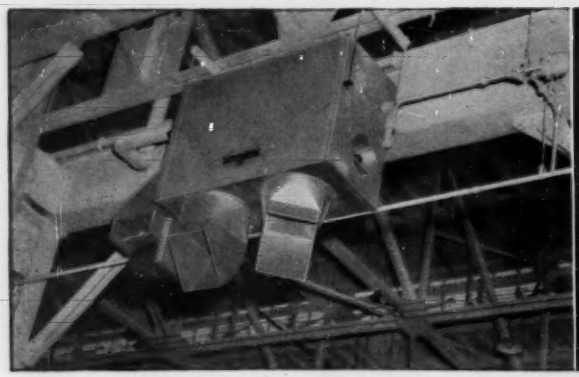

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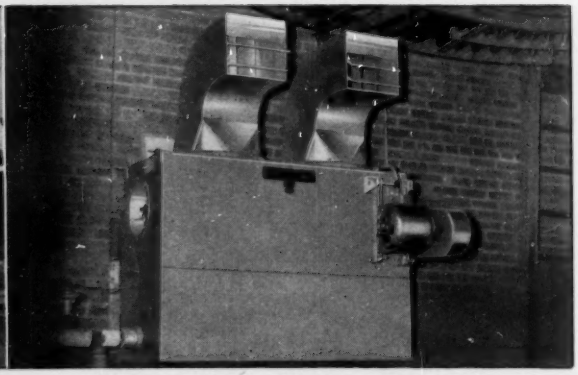

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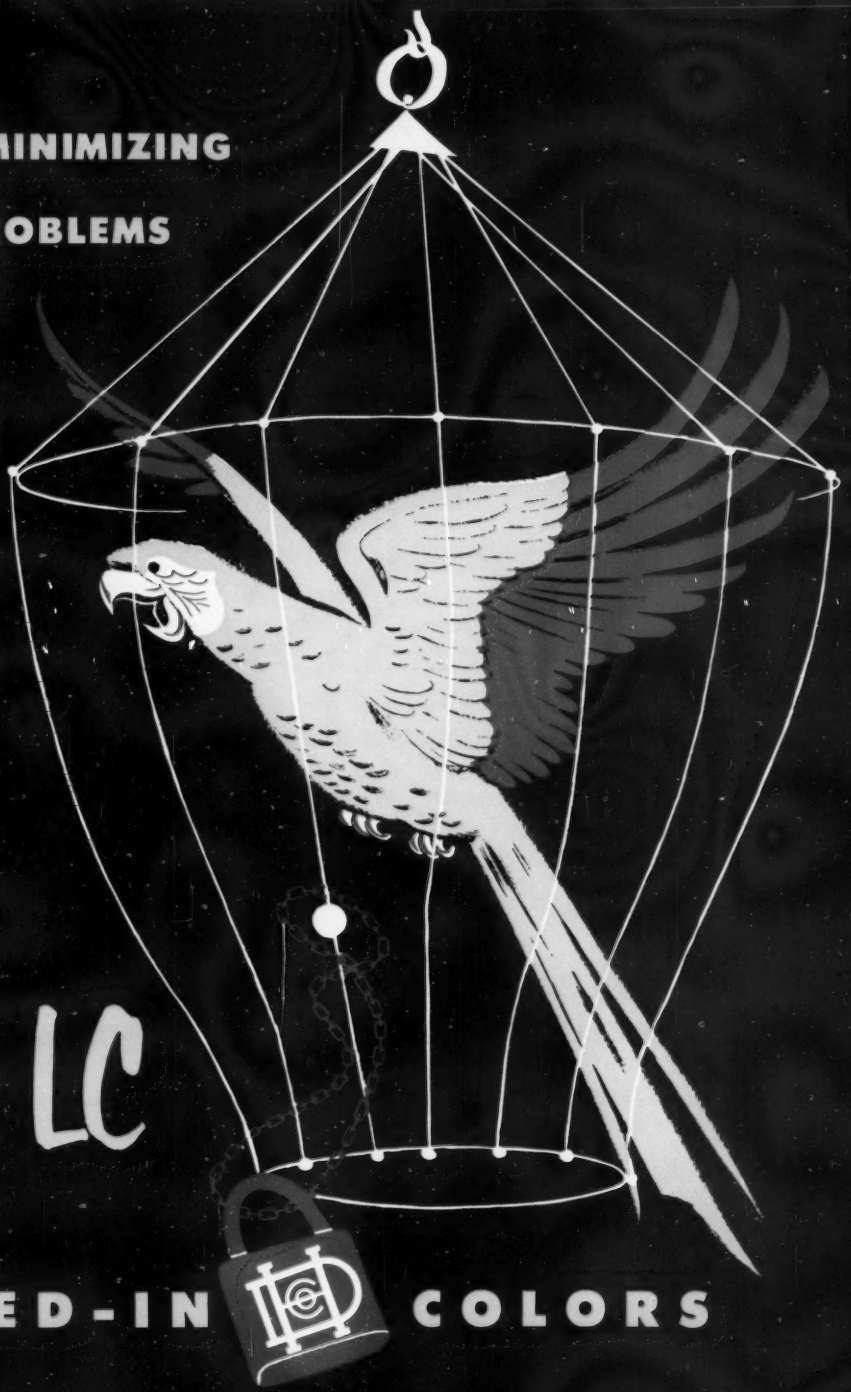

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. . . you, too, will find that it's good business to produce in Georgia. Over 7100 manufacturers, including many of America's greatest industrial names, have already staked their claims to share in Georgia's Golden Age. Georgia—scene of America's first gold rush in 1828, today offers many nearby, growing consumer markets to sales-minded industries . . .

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Even the weather is on your side in Georgia, where every day is production day. Industry is on the move to Georgia . . . with an amazing array of natural and physical resources, readily accessible and in abundant supply. Superb transportation—plus a liberal pool of intelligent workers make it easy to produce and move goods *fast!*

Get the facts from Scott Candler, Secretary—Dept. 22

GEORGIA DEPT. OF COMMERCE

SCOTT CANDLER, SECRETARY • 100 STATE CAPITOL • ATLANTA, GEORGIA

News in Brief

Congress to Look at Textiles. The Senate Finance Committee approved Senate Resolution 121, by Senator Thurmond (D., S. C.) and 49 others, to investigate the impact

of Japanese textile imports on the domestic industry. * * * New England congressmen and governors have demanded a sweeping Congressional probe of the textile industry, including reconsideration of Federal tax, wage, and other policies which they consider stimulating to the textile merger movement and to transfer of mills to the South.

Textile Education Too Specialized? Speaking at the 63rd annual meeting of the American Society of Engineering Education, Dean Charles F. Edlund of Lowell Technological Institute urged a more analytic treatment of the traditional textile courses in the textile college curriculum. "Too often we leave the basic sciences behind when we complete the specialization process. Our hope in the future requires that we take them with us into the more specialized courses," Dean Edlund stated. "While the textile industry might once have been an art, it is most certainly rapidly changing to a very complex science. . . . it is no longer possible to train undergraduates in specific processes and equipment, or at least not profitable to do so . . . . I believe we can best serve industry by providing it with men who have some grasp of the entire operation of a business and who are equipped to rise to executive positions of great responsibility . . . . industry or the graduate school must be looked to to complete the final specialization."

Comment from Small Woolen Mill in Northern Clime. "We may operate during the summer months, but we won't during the winter. We can't make enough to heat the building in the winter."

35-Hour Week for Philadelphia Operatives. 6,000 members of Local 190, Knitgoods Workers Union, AFL, Philadelphia, Pa., went to a 35-hour work week recently, in line with previous contract provisions that the former 37½-hour week would be reduced to the new figure.

Ultrasonic Dyeing. A process said to bring about at least a tenfold speed-up in dyeing and bleaching operations by the use of ultrasonic vibrations is being marketed by General Ultra Sonic Co. The process, called Sonidye, is claimed to be capable of dyeing Orlon in two to three minutes, as compared with two to three hours in conventional production. The speed-up is said to be the result of the ultrasonic vibrations causing the fibers to come into contact with a much larger quantity of dyestuff than occurs in the usual dyeing methods.

Canadian Core Yarn. Canadian mills have been greatly interested recently in the development by the Special Projects Branch of the Department of Inter-Service Development of a multi-core wool-nylon yarn. Fabrics woven from the new yarn are said to be stronger than ordinary cloths, and will probably have their principal use in military and industrial fields. They have not demonstrated any particular qualities of appearance, handle, or lightness not already available, although all sorts of fanciful properties, including protection from H-bomb radiation, were attributed to them in first reports in the consumer press. Patent applications have been filed in Canada, the United States, and in European countries; royalties from licensed mills will accrue to the Canadian government. Mills in Canada (and elsewhere) have been spinning natural fibers around a synthetic filament core for years, but the new method is said to involve treatment of the yarn with a silicone, and heat treatment of the fabric.

New Air Force Uniform Approved. The Air Force has approved a silver-tan summer service uniform to replace the standard khaki. The new uniform includes

Bermuda shorts and knee-length stockings. Wearing of the new uniform will not be mandatory until July 1, 1959.

Wage-Fixing Protest Reaches Court of Appeals. The question of whether a government official has power to fix a single minimum wage for an entire industry under the Walsh-Healey public contracts law has reached the U. S. Court of Appeals in Washington. The case came to the appellate court by way of an appeal action on the part of the government. The Walsh-Healey

"Ground Floor" Advantages for

Career Advancement

IN A DYNAMIC NEW INDUSTRY

The present 450-million-pound annual production in the new, dynamic, rapidly-expanding chemical-textile fiber field will increase by an estimated 200 per cent within the next ten years alone. There has been a 200 per cent increase since 1950. Your chances for a growing career can be much better if you get in on the ground floor of this new industry now.

Chemstrand is starting its third major expansion in four years. Your opportunities in this young, rapidly-expanding company are as bright as the future of this new industry.

Thriving South rapidly becoming center of nation's chemical industry. More than half of the nation's new chemical plants have located in the South in the last few years, and an estimated 300 more will be built during the next ten years—a total of 10,000 plants of all types in the next 10 years.

Ideal living conditions. Decatur, Alabama, is in the famous "Little Great Lakes" area, and Pensacola, Florida, on the sunny Gulf of Mexico. Both places offer unsurpassed fishing . . . boating pleasures . . . swimming . . . year-round golf . . . good hunting . . . and other highly attractive sports.

CHEMSTRAND

Immediate Openings at Chemstrand's Nylon Plant at Pensacola, Florida, and Chemstrand's Acrilan* Plant, General Engineering Department, and Research & Development Center at Decatur, Alabama, for

ENGINEERS

Chemical, Mechanical, Electrical, Textile, Civil and Industrial

Wide range of engineering work including machine and equipment design, electrical, power and steam engineering, process design, and a variety of mechanical, chemical and textile development projects.

For interview, send letter outlining education and experience or write for additional information about Chemstrand and the New Industrial South to TECHNICAL PERSONNEL DEPARTMENT, Box TI-1 THE CHEMSTRAND CORPORATION, DECATUR, ALABAMA

* ® ACRYLIC FIBER BY CHEMSTRAND CORPORATION

THE CHEMSTRAND CORPORATION, DECATUR, ALABAMA

TOMORROW'S BIG DECISIONS WILL BE MADE **by the men who act today...**

Act provides that when a firm works on government contracts exceeding $10,000 in value, the Labor Department can determine certain minimum standards which prevail in the firm's locality. About 150 plaintiff textile companies contend that over the years the Secretary of Labor has arbitrarily and illegally construed the word "locality" to mean the entire United States, or an entire industry, and that wage-fixing authority has thus become concentrated in one person.

Women Sweep NETF Scholarship Contest. All five scholarships offered this year by the New England Textile Foundation were won by women. The scholarships are awarded for tuition and expenses at the New England textile college of the winners' choice. There were 54 applicants this year, of whom 23 were women.

Commerce Department Optimistic. The midyear survey of major industries by the U. S. Department of Commerce indicates that these industries will achieve new all-time high production and sales records in 1955. The Department's report on textiles says: "The textile market has been slowly gathering strength during the first half of the year and good volume at somewhat better prices is expected for the last six months, which would put the mills in a better financial situation than they were in 1954. Man-made fibers continue in expanded use in practically all areas of textile products."

Dutch to Build Spinning Machinery. The Dutch firm Nederlandsche Textielmachine-Fabriek Egberink NV, at Hengelo, Netherlands, has started production of cotton ring spinning frames. The company is the first firm in Holland to enter this field.

Advantageous for All Mills to Aid in Tariff Fight. Although mills on some types of goods are not presently affected by the lowering of tariffs to permit foreign textile competition, they realize that those mills which are affected may switch to their constructions; therefore, mills which are not troubled at this time are joining hands in the tariff scrap to protect their own interests in the future.

European Man-Made Fiber Producers to Meet. The International Committee of Rayon and Man-Made Fiber Producers will sponsor a quality control conference on European man-made fibers in Gothenburg, Sweden, in the fall of 1956.

New Canadian Textile Associations. Three new associations have been formed within the Textile Technical Federation of Canada: Kingston (Ont.) Textile Association, Sherbrooke (P. Q.) Textile Association, and the Institute of Textile Science. Nine Associations are now affiliated with the Federation.

Wool Consumption. Consumption of all fibers on the woolen and worsted systems during 1954 was 612 million pounds, 19% below the 1953 figure, reports the U. S. Department of Commerce. Consumption of raw wool, on a scoured basis, was 381 million pounds, lowest figure since 1938.

Slater Mill Opens as Museum. The Old Slater Mill, Pawtucket, R. I., has opened its doors to the public as a living museum of the early American textile industry, and will

remain open through October 1. Built in 1793 by Samuel Slater and his partners, the Old Slater Mill was the first successful cotton mill in America. The museum contains early textile machines and replicas, paintings, prints, and photographs.

News in Brief

Shipments of Women's Outerwear Increase. The net value of shipments of the principal women's outerwear industries in May, 1955, was $238 million, up 18% from May, 1954, according to figures released by the Bureau of the Census.

Note on the Price-Support Program. The U. S. Department of Agriculture reports that the investment of the Commodity Credit Corporation in upland cotton as of May 31, 1955, totaled nearly one and a half billion dollars. Loans outstanding on that date included $1,113,018,141 on 6,512,142 bales. Major items in the CCC inventory included 1,727,725 bales of upland cotton with a value of $302,175,455.

Help for Textile Literature Searches. The Special Libraries Association has formed a Paper and Textile Section, which will have the responsibility of maintaining and broadening literature in these fields, with emphasis on facilitating interlibrary communications. David R. Weiser, The Champion Paper and Fibre Co., Hamilton, Ohio, is chairman of the new section.

Underwear Institute Announces Meeting Dates. The 1956 Annual Meeting of the Underwear Institute will be held in New York on May 4. The 1957 meeting will be held at the Hotel Traymore, Atlantic City, N. J., on April 29, to coincide with the Knitting Arts Exhibition during the week of April 29 through May 3.

Philadelphia QM Depot Takes Over Disbursement. The disbursing function of the Philadelphia Finance Office, U. S. Army, applicable to Philadelphia Quartermaster Depot procurements, was transferred to the Depot recently. Payments under all existing Army contracts, previously handled by the Philadelphia Finance Office, will in the future be made by the

BETTER products FASTER

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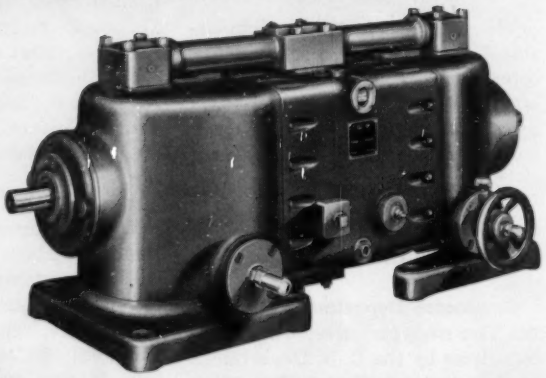
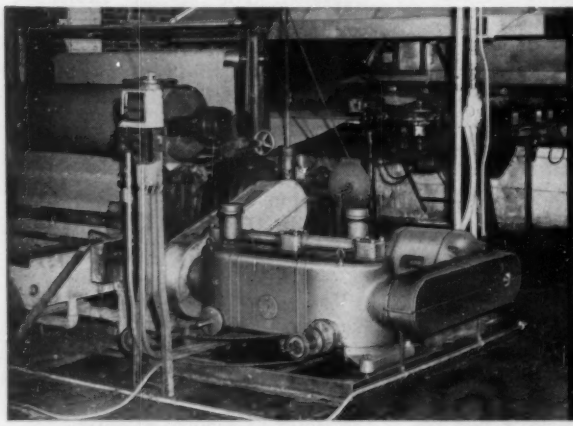
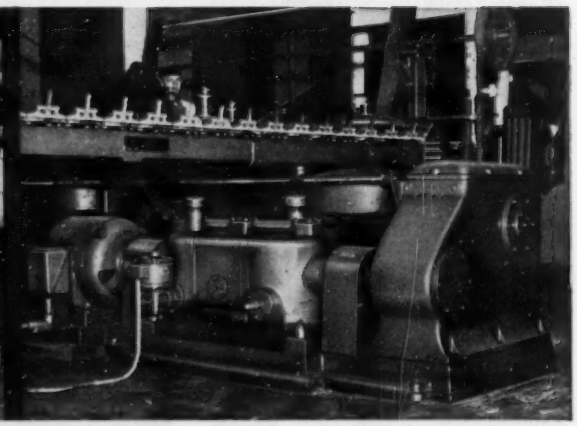
Extreme precision of control and phenomenally low maintenance are among the characteristics which make Vickers Hydraulic Variable Speed Drives so desirable on textile machinery. Infinitely variable and stepless running speeds, selective creep speeds, automatic overload protection, independent adjustment of acceleration and deceleration and automatic maintenance of tension, are other advantages you get with Vickers Hydraulic Equipment.

Note applications below and then ask our nearest Application Engineering Office for a copy of Textile Bulletin 54-66.







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This machine has operated six years without maintenance except periodic oil changes. Superior speed control is obtained from dancer roll signal through chain and sprocket arrangement. Stepless speed selection is infinitely variable from zero up to maximum. Controlled acceleration and deceleration rates are positive and smooth. Variable horsepower generator characteristics keep power input down to requirements of machine under all load conditions.

VICKERS HYDRAULIC TENTERING FRAME DRIVE

Easily adjustable tension is accurately maintained automatically. Speed variation is stepless and infinite from zero to maximum while creep speeds are selective instead of fixed. With this drive the machine does better work faster with complete dependability.

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7249

Engineers and Builders of Hydraulic Equipment Since 1921

Finance and Accounts Officer, Philadelphia Quartermaster Depot, 2800 South 20th St., Philadelphia 45, Pa.

Labor Notes. An employer need not permit unions to distribute literature on company premises [in the plant] merely because he does so himself, the National Labor Relations Board has held in a recent decision. * * * Distribution of union literature on a company parking lot by a stranger union has been held protected activity, and an NLRB order against an employer who prohibited such distribution has been upheld by the Court of Appeals for the Sixth Circuit. * * * Employees receiving payments during a layoff under a Guaranteed Annual Wage plan are not eligible for state unemployment compensation benefits, according to a decision of an Oregon Circuit Court. Many state laws reportedly have provisions similar to those contained in the Oregon statute on which the decision was based. * * * False union propaganda may be so extreme and so misleading as to justify setting aside an election after a union victory, NLRB recently ruled.—*NAM Law Department.*

Imports of Man-Made Fibers. Imports of rayon staple totaled 58,697,000 pounds during the first four months of 1955, more than was imported during the whole of 1954. West Germany was the principal supplier; 17% of the January-April imports came from that country. France supplied 15%, Italy 14%, United Kingdom 13%, Belgium 12%, Norway 7%, Switzerland 6%, and all other countries 16%. Imports of noncellulosic man-made staple were 104,000 pounds during the same period, a gain of 21% over 1954.

Textile Town Fights Tariff Concessions. Kershaw, S. C., site of one of the plants of The Springs Cotton Mills, has formed a committee of prominent citizens in the town to protest to the President and the Congress the tariff concessions recently granted to low-wage countries. The committee is on record as proposing a quota which would permit increase of foreign goods imports into the United States of not over 50%, based on the average for 1953-54, with appropriate subdivisions by products so as to avoid inequitable import concentrations.

More Wool Promotion Needed. The need for a higher level of wool promotion, stressing international cooperation, was described by delegates to the annual conference of the International Wool Textile Organization, held recently at

Munich, Germany, as the surest cure for wool's ills. The conference viewed with alarm the current trend in all countries for consumers to divert additional income to travel, amusement, television, and household appliances, rather than to clothing.

British Navy Flags to Be Nylon Blend. Royal Navy ship and shore establishments are to adopt a blend of 75-25 nylon-wool for flags, according to an announcement by British Nylon Spinners Ltd. Tests showed that the life of the nylon-wool flags was two and a half times as long as those of the all-worsted fabrics at present in general service.

Textron Buys Cable System. Textron American, Inc., has purchased the cable system of Western Union Telegraph Co., as part of its program to diversify away

from textiles. Textron will form a wholly-owned subsidiary, Western Union Cables, Inc., as an independent company in the Textron family.

Most Men's Hosiery Sold at End of Year. A recent survey of sales of men's hosiery in stores throughout the country, made for *Department Store Economist*, shows the following month-to-month distribution of sales during the year:

Month—1954	Per Cent
January	3.8
February	4.2
March	5.1
April	6.4
May	6.3
June	9.2
July	4.9
August	5.9
September	6.5
October	8.4
November	10.7
December	28.6

Mill Employee Wins $26,000 from CIO. A South Carolina textile mill operative has been awarded $26,000 by the State Supreme Court in a suit against a local of the Textile Workers Union of America (CIO) growing out of injuries he sustained in a strike four years ago.

Publications of Textile Interest. "Toward Steadier Work and Pay" gives more than 100 ideas and techniques to forestall demands for the Guaranteed Annual Wage. Available from the National Association of Manufacturers, 2 East 48th St., New York 17, N. Y. Price not given. * * * "The Textile Industry in Europe" diagnoses the ills of the European textile industry and recommends remedies. Published by Organization for European Economic Co-operation, 2002 P St., N.W., Washington 6, D. C. Price, $1.00. * * * "The Why of Textile Standards"—a reprint of articles by Jules Labarthe, Mellon Institute, which appeared in *Department Store Economist.* Available from Mellon Institute, 4400 Fifth Ave., Pittsburgh 13, Pa. Free. * * * "Cotton Production and Distribution," Bulletin 191 of the Bureau of the Census, U. S. Department of Commerce, gives statistical data for the year ending July 31, 1954. For sale by the Superintendent of Documents, U. S. Govern-

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for practical, profitable, permanent shrink proofing! use

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a dependable product for DURABLE stabilization of synthetic and cotton fabrics!

"Get these Plus Values!"

- ★ crush resistance without loading!
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HARTORESIN T — a genuinely outstanding development — provides lasting and complete shrink-and-crush-proofness for synthetic and cotton textile fabrics. A fabric stabilized for the life of its use is now a *reality!*

"Get to the HART of shrink-control — get HARTORESIN T!"

Save yourself time, worry, and money! Write, wire, or phone now for a sample. Proof is in performance. Top technical service and prompt delivery are assured.

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Hart Products Company of Canada, Ltd., Guelph, Ontario

ment Printing Office, Washington 25, D. C. Price, 25 cents. * * * "Directory of Libraries for Paper and Allied Industries [including textile] in the U. S. and Canada," available from David R. Weiser, The Champion Paper and Fibre Co., Hamilton, Ohio. Free. * * * "Occupational Safety Services," Service Guide 2.1 of the National Safety Council, is a complete catalog of the accident prevention aids prepared by the Council. Available from the National Safety Council, 425 N. Michigan Ave., Chicago 11, Ill.

AATCC Scholarships. The Piedmont Section, American Association of Textile Chemists and Colorists, has established the Charles H. Stone Scholarship Fund, from which a $250 scholarship will be awarded each year to a junior or senior in textile chemistry and dyeing at N. C. State College and Clemson College, or to a young man employed in textiles or an allied industry within the Section's geographical boundaries. A similar award of $500 has been established by the Association's Southeastern Section, to be given to a worthy student at Georgia Tech or Auburn, preferably to a member of the student AATCC Chapter at either school.

Course for Textile Credit Men. A correspondence course in credit analysis for textile personnel, sponsored by the National Credit Office, Inc., will start October 1, 1955. All secondary school graduates in the industry are eligible. Details are available from the National Credit Office, Inc., 2 Park Ave., New York 16, N. Y., or from the NCO offices in Atlanta, Boston, Chicago, Cleveland, Detroit, Los Angeles, and Philadelphia.

Production of Man-Made Fibers. Production of man-made fibers in the free world was at an all-time peak in 1954, totaling the equivalent of 9,700,000 bales of cotton, compared with 8,700,000 bales in 1951. Since 1949, consumption of these fibers has increased 4 million bales, compared with increase in cotton consumption of 4,800,000 bales. Plant capacity for man-made fibers throughout the world is expected to total 13,200,000 bales in December, 1955, compared with 12,200,000 in 1954.—*National Bank of Commerce, Memphis, Tenn.*

Busy Year for Better Business Bureaus. Inquiries and complaints handled by the Better Business Bureaus in the United States and Canada reached a new high in 1954, while the number of advertisements requiring investigation and action reached a new post-war low. Inquiries outnumbered complaints 4 to 1, and accounted for the entire 6 per cent increase in calls on the Bureaus compared to 1953. According to the BBB, the decrease in questionable advertising "suggests a general lessening of the causes of public concern—a reduction in advertising and selling practices which cause justified customer complaints." [Last year's report: TEXTILE INDUSTRIES for May, 1954, p. 79.]

Tip for Detecting Static Electricity. Hold a 1/25th-watt neon glow bulb near a V-belt as a simple means to check for potentially dangerous static electricity. The bulb actually will light if there is

static electricity around the belt. There may be enough static electricity generated to knock the bulb out of your hand, so some kind of a holder is recommended. Attaching the bulb to the end of a pencil is a good idea.—*Dayton Rubber Co.*

New York Cotton Exchange Adopts New Futures Contract. Members of the New York Cotton Exchange have voted to adopt a new contract for the future delivery of cotton. Trading in the new contract started June 1st, and will be for delivery in October 1956 and thereafter. Salient features of the new contract are: (a) a staple basis of one inch; (b) elimination of 7/8-inch cotton on deliveries, which will make the minimum deliverable staple 29/32 inch; (c) full staple premium for 1 1/32-inch

News in Brief

cotton; and, on the delivery of 1 1/16-inch cotton and longer, the full staple premium for 1 1/32-inch plus 75 per cent of the difference between 1 1/16-inch and 1 1/32-inch; and (d) a Micronaire test reading of not less than 3.5. [See TEXTILE INDUSTRIES for July, 1955, p. 93, for details.]

Knit Goods Still "Textiles." Opposition by the Underwear Institute and the National Knitted Outerwear Association has apparently blocked the attempt by the National Association of Shirt, Pajama and Sportswear Manufacturers to have the government reclassify knit goods as "apparel" rather than "textiles" for statistical purposes. NASPSM wanted the change made in the Standard Industrial Classification Manual on the basis of the end use of most knit goods. Implications: the Manual is used in wage-hour and similar proceedings, emergency price control, etc.; reclassification might also be basis for inter-association membership "raids."

ICS Publishes New Texts. Four new texts are available from the International Correspondence Schools, Scranton, Pa.: "Introduction to Textiles" is now offered to all textile students regardless of their phase of specialization; "Standard Textile Fabrics" is published in two parts, Part 1 devoted to cotton, and Part 2 to other fabrics; "Textiles: Care and Testing" discusses cleaning, stain removal, repair, etc. The new texts are available under the ICS selective plan which permits employers to select only those subjects required to achieve specific training objectives for their personnel.

Nylon Blend Cuts Work Glove Costs. Work gloves made of heavy-duty canton flannel of cotton and nylon outlasted conventional cotton gloves by better than two to one in tests at General Motors' Linden, N. J., assembly plant, according to the Du Pont Co. Cost savings, based on current market

FOR SEAMLESS DUNN SYSTEM FINISHING

Mauney Hosiery Mills, Inc., Kings Mountain, N. C., uses Turbo Machines with double sock forms to almost double their production . . . cut costs.

Board with Turbo Forms in a Turbo Machine

Having trouble with combination finishing of seamless hosiery after dyeing? Then, you need the Turbo ADS-48 four-cycles — preheating, air expulsion, steaming and drying.

Want extra production of stretch-yarn socks? Then, you need the Turbo with double or triple sock forms.

With Turbo Machines there's controlled timing, controlled temperatures, controlled condensation, preheating and drying . . . four time cycles. You end up with sales-appealing merchandise plus savings in steam and labor. Whether it's fiber, yarn, socks, stockings, piece goods or finished garments, there's a Turbo Machine to give you better setting and finishing.

Complete your production team with Turbo forms. All are made from one-piece, solid aluminum, beautifully polished. Edges are as smooth as a wet seal. Garments slip off and on without a snag or pull.

Write, wire or phone for additional information about the *complete* Turbo line — forms that help speed production, machines that "set for life".

TURBO
SINCE 1929

TURBO MACHINE COMPANY
LANSDALE, PENNA., U.S.A.

Southern Representative: F. W. Warrington Co., Charlotte, N. C.
"Builders of Precision Machines for a Quarter Century"

prices for gloves tested, ranged from 21 to 38 per cent, depending on glove construction. For the test, 72 pairs of gloves of three types were worn alternately in finishing welded body seams by filing and polishing with emery. Gloves were withdrawn from wear at the first sign of failure. Average wear life for all-cotton gloves was 6.9 hours, while gloves with nylon blended into the palms withstood 10.9 hours of duty. Top average performance of 14.9 hours was recorded by gloves with palms and backs of nylon-cotton blend.

MERCHANDISING NOTES

American Cyanamid Co. has undertaken a program of education designed to encourage the consumer to look for and demand a label which identifies the finish applied to a garment, provides simple and clear handling instructions, and which will assure the customer that a reputable company stands behind the claims.

American Viscose Corp. announces that "wash and wear" rayon fabrics will soon be avail-

able under the Avcoset finishing program. * * * The company has scrapped "Tufton" as the name for its rayon staple. "Avisco" will now be featured as the brand name for all consumer products.

Carpet Institute will establish a Retailer Advisory Council, composed of 16 retailers, divided equally on the basis of geographical location and type of operation.

Celanese Corp. of America recently established five regional offices in an expansion of its merchandising and promotional activities with retail stores. The offices are in Los Angeles, Dallas, Boston, Chicago, and Charlotte.

Chicopee Mills' Lumite Division announces that "Lum-Puf," the type of fabric used as original upholstery on several 1955 Fords, is now available to seat cover manufacturers, jobbers, and auto trim shops.

The Denim Council has been presented an Award of Merit by the National Men's Fashion Pageant, for "outstanding efforts during the past year in the promotion and advancement of the men's wear industry" on the part of denim producers and denim garment manufacturers.

Indian Head Mills, Inc., has begun what is claimed as the largest single advertising and promotional campaign ever undertaken in the retail piece goods field. The campaign will feature color and black and white ads in consumer publications with a combined circulation of over 38 million.

A. & M. Karagheusian, Inc., introduced "Pepper Ridge," tufted wool carpet with a handcrafted look, at the summer markets.

Lawtex Corp. is producing a bedspread tufted with a yarn of Bemberg rayon and nylon, claimed to be practically lint-free.

Du Pont has launched an educational trade campaign for the slacks industry, stressing the fact that Dacron, Orlon, and nylon each has unique properties and charac-

teristics best suited to specific fabric types. Dacron is recommended in clear-finished resilient fabrics, Orlon for soft-finished fabrics, and nylon as a reinforcing fiber where strength is required.

James Lees and Sons Co., commercial carpet specialists note that businessmen are brightening up their offices, making them more homelike, and at the same time seeking to increase efficiency in the decorative process. Abstract and geometric patterns are gaining in popularity in the commercial field, with novelty numbers being used in many places. Hotels, motels, and churches are particularly active areas for new carpeting.

National Association of Hosiery Manufacturers expects the inclusion of Bermuda shorts in the new Air Force uniform to give a big boost to the sale of longer socks for men. * * * NAHM estimates that a potential sale of 3,000,000 dozen pairs of women's knee-high hosiery is now clearly possible.

Charles Ulmer, Inc., is producing a two-ply blanket, "Ulmerwarm," intended for boating, camping, picnicking, etc. One layer of the blanket is vinyl film and the other is Dynel.

The Wool Bureau, Inc., announces that promotional projects for this fall include nation-wide campaigns in behalf of wool jersey, men's and women's wool sportswear, and wool fabrics for the home sewing enthusiast.

One woolen mill which manufactures fabric for women's dresses and suits, and which may have on hand yardage which has not sold, runs the suiting through the nappers and then sells the goods as blankets. In this way the mill gets its investment out of the goods, rather than sacrificing them—but it is a slow process. At least there is this unique point: The woman

who buys one of these blankets rarely finds another like it anywhere else.

METRO-ATLANTIC'S

DACRO-DYE

The Most Efficient DACRON DYEING Assistant Ever Offered!

DACRO-DYE

For Higher Color Values and Economies in DACRON DYEING

DACRO-DYE

For Fuller and More Even Shades in DACRON DYEING

DACRO-DYE A newly developed "carrier" for dyeing Dacron polyester fiber with dispersed type dyestuffs. Free flowing, self-emulsifying. Easy to apply. Extremely economical.

Complete Technical Information on Request.

Mill Runs Arranged At Your Request and Convenience.

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OFFICES AND WAREHOUSES: GREENVILLE, S. C., PATERSON, N. J. • CANADIAN BRANCH: GRANBY, QUEBEC

IMPORTED DYESTUFF SPECIALTIES: FARBWERKE HOECHST AG, WEST GERMANY

AN EXECUTIVE Views

THE NEWS IN TEXTILES

Prepared by a man who is closely identified with the textile industry.

On Foreign Cotton

FOR SOME TIME we have been intimating in this space that foreign industrialists do not have a monopoly on low-cost labor. We have been implying that foreign agriculture would one of these days begin to come into its own, forked sticks would be replaced by mule-drawn plows, that these would fall by the wayside in the face of Marshall aid tractors.

We do not claim that that day has come, but we do contend that the clouds are gathering on the distant horizon. Take, for example, the case of Pakistan. We do not have at hand the historical record of what this little country has done in the field of agriculture since its separation from India, but we do have some very recent figures as to its prospective cotton production for the current growth year.

Pakistan sources indicate that 3,185,000 acres were planted in cotton, and the country's expected production is 1,596,000 bales. With America holding the umbrella over world cotton prices through its farm price support program, the growing of cotton has become a very, very profitable endeavor.

It may be worthy of particular note that Pakistan's cotton production is just about enough to take care of all the cotton needs of the Japanese textile industry.

We doubt that the Pakistanis have ever heard of the Rust brothers, but one of these days they are going to hear about mechanical cotton pickers, flame cultivators, and other such newfangled ideas. If they do not stumble across this information themselves, we are willing to take a small bet that the United States has had some sort of a "mission" in Pakistan recently trying to show them how to undersell the American cotton farmer.

Monopoly

All students of American history know that there was a period in the life of this country when business monopolies held sway—or tried to hold sway—and when the Little Man was ground between the forces of the railroad barons and the steel barons. Today we have a new kind of monopoly. Its purposes are two-fold: The enrichment of those who hold the monopoly, and the enslavement of the individual.

The recent "negotiations" between the automobile industry and the unions are illustrative of the strangle hold which labor now has on a considerable section of the American economy. As we see it from here, the question is no longer how much the automobile manufacturers will give the unions, but how much the unions can afford to ask for without encouraging adverse public opinion.

The automobile industry seems willing to grant anything that is requested, because it can pass on the increased cost to the consumer. The consumer, dazzled by union claims that the increase will be paid from staggering industry profits and starry-eyed in his desire to help the down-trodden working man, goes along with only a few murmurs from the more conservative element off-stage. When this same consumer buys his next automobile, he attributes the exhorbitant price to staggering industry profits — and the circle starts over again.

As bad as this filching may have become, we are in for even worse. The expected merger of the American Federation of Labor and of the Congress for Industrial Organization seems to us to bode nothing but ill. We very much fear that before the curtain rings down, we are going to see the strongest political and economic monopoly this country has ever witnessed.

With seemingly unlimited financial resources, the combined AFL and CIO, playing hand and glove with politicians and some elements of industry, will have a big voice in hundreds of elections from township magistrate to the President of the United States.

Since congressional committees seem intent upon investigating each new corporate merger, might it not be a good idea for them to do a little investigating of the labor merger and monopoly?

Uncle Santa Claus

We have read in the papers where another one of our famous or infamous "missions" has recently returned from Japan. This one told the Japs that it was not enough to secure lower U. S. tariffs, and that they were going to have to do a better job of styling for the American market. Why not just give them the American textile industry, the garment industry, and the American cotton farms and be done with it?

The cynical and caustic reader may be thinking at this point that the Japanese had little or no difficulty in styling for the American market at approximately 8:00 A.M. of a bright Sunday morning, December 7, 1941. The port of entry was Pearl Harbor, and the goods were consigned for the American fleet.

Life of Reilly

The U. S. Bureau of Labor Statistics has recently issued a report based upon a survey it made in November 1954, which is entitled "Wage Structure—Cotton Textiles." This report is not recom-

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mended as vacation reading, but it does contain some rather interesting facts. To save you the trouble of reading the report, here are a few of them:

Approximately 353,000 production operatives are employed in cotton textile mills; some 87% of all employees are in the South; New England has only 9%; average hourly straight-time earnings for the industry were $1.19; the southern average was $1.17, and the New England average was $1.32; however, the southern figure is identical with that for March 1952, while the New England figure has dropped six cents an hour; more fine goods are now produced in the South than in New England.

Finally, and this is how we get around to the above title of "Life of Reilly," 19% of southern production operatives are covered by some type of pension plan, while 6% of those in New England are covered.

Quotable Quotes

By way of conclusion, you may find interesting the following brief quotes:

Major-General MacNaughton, U. S. General in Tokyo, through his economic aide: "The Japanese [textile] machines cannot compare with the American machines. The Japanese machines break down and do not do the precision work of the American machines."

Mr. Kojiro Abe, chairman, All Japan Cotton Spinners' Association: "The great majority of the [textile] equipment now in place is the latest type machinery of very high efficiency. This is the vital factor which has strengthened the competitive power of our cotton products in the world market."

The *Osaka News:* "The Ministry of International Trade and Industry, Ministry of Finance, and the Bank of Japan have recently made approval for the import of Mexican cotton of 10 million dollars through credit by city banks in the United States."

Japanese language paper: "Recent Geneva tariff negotiations will not much hurt Japanese textile industry."

You can bet your sweet life they won't!

SEPTEMBER

Sept. 8-9—Fall meeting, **The Fiber Society,** Massachusetts Institute of Technology, Cambridge, Mass.

Sept. 10—Meeting **Southeastern Section AATCC,** Ralston Hotel, Columbus, Ga.

Sept. 14-16—Annual **Southeastern Personnel Conference,** Duke University, Durham, N. C.

Sept. 16—Meeting **Western New England Section AATCC,** Rapp's Restaurant, Shelton, Conn.

Sept. 16-17—Annual meeting, **Combed Yarn Spinners Association,** The Homestead, Hot Springs, Va.

Sept. 20-21—**The Chemical Finishing Conference** sponsored by the National Cotton Council of America, Chalfonte-Haddon Hall, Atlantic City, N. J.

Sept. 22-24—National convention, **AATCC,** Chalfonte-Haddon Hall, Atlantic City, N. J.

Sept. 29-30—Annual outing **Chattanooga Yarn Association,** Lookout Mountain Hotel, Chattanooga, Tenn.

Sept. 29-30—101st annual meeting of **National Association of Cotton Manufacturers** and 3rd annual meeting of **Northern Textile Association,** Wentworth-by-the-Sea, Portsmouth, N. H.

Sept. 29-30—Fall meeting of the **Southern Textile Methods and Standards Association,** The Clemson House, Clemson, S. C.

Sept. 29-30—Fall meeting **Carolinas Section American Society for Quality Control,** Hotel Wm. R. Barringer, Charlotte, N. C.

OCTOBER

Oct. 1—Fall meeting, **Alabama Textile Operating Executives,** Thach Hall, Alabama Polytechnic Institute, Auburn, Ala.

Oct. 1—Meeting **South Carolina Division STA,** Clemson House, Clemson, S. C.

Oct. 7—Meeting **Pacific Southwest Section AATCC,** Gourmet Restaurant, Beverly Hills, Calif.

Oct. 13—Meeting **Rhode Island Section AATCC,** Johnson's Hummocks, Providence, R. I.

Oct. 13-14—49th annual meeting **North Carolina Textile Manufacturers Association,** Carolina Hotel, Pinehurst, N. C.

Oct. 14—Meeting **New York Section AATCC,** Kohler's Swiss Chalet, Rochelle Park, N. J.

Oct. 14—Meeting **Northern New England Section AATCC.**

Oct. 17-19—Fall meeting, **National Council for Textile Education,** The Larches, Hopedale, Mass. Hosts: American Textile Machinery Association.

Oct. 17-21—43rd **National Safety Congress and Exposition,** Conrad Hilton, Congress, Morrison, and LaSalle Hotels, Chicago, Ill.

Oct. 21—Meeting **Philadelphia Section AATCC,** Penn-Sherwood Hotel, Philadelphia, Pa.

Oct. 29—Fall meeting **Textile Operating Executives of Georgia,** Georgia Institute of Technology, Atlanta, Ga. Subjects for discussion: Slashing, weaving, power, and maintenance, 9:00 A.M.

Oct. 29—Meeting **Mid-West Section AATCC,** Bismarck Hotel, Chicago, Ill.

Oct. 29—Meeting **Piedmont Section AATCC,** Hotel Wm. R. Barringer, Charlotte, N. C.

NOVEMBER

Nov. 3-4—Annual **Mid-Atlantic AIEE Textile Conference,** North Carolina State College, Raleigh, N. C.

Nov. 10-11—Annual meeting **Carded Yarn Association,** Bon Air Hotel, Augusta, Ga.

DECEMBER

Dec. 6-7—Film, Sheeting, and **Coated Fabrics Conference of the Society of the Plastics Industry,** Hotel Commodore, New York, N. Y.

Dec. 10—Meeting **South Central Section AATCC,** Hotel Patten, Chattanooga, Tenn.

1956

Jan. 30-31—Annual meeting **National Cotton Council of America,** Biloxi, Miss.

Feb. 15-17—Seventh annual **Cotton Research Clinic,** sponsored by National Cotton Council, Pinehurst, N. C.

April 5-7—Annual convention **American Cotton Manufacturers Institute,** Hollywood Beach (Fla.) Hotel.

April 11-13—Annual convention **Alabama Cotton Manufacturers Association,** Hotel Buena Vista, Biloxi, Miss.

April 18-19—Annual convention **National Knitted Outerwear Association,** Waldorf-Astoria Hotel, New York, N. Y.

April 19-21—Annual convention **Phi Psi Fraternity,** Alabama Polytechnic Institute, Auburn, Ala.

April 30-May 1—Annual meeting **National Association of Hosiery Manufacturers and Hosiery Industry Conference,** Boca Raton (Fla.) Hotel and Club.

May 2-3—Spring meeting of **The Fiber Society, Inc.,** The Clemson House, Clemson, S. C.

May 4—Annual convention of the **Underwear Institute.**

June 21-23—Annual convention **Southern Textile Association,** Mayview Manor and Green Park Hotel, Blowing Rock, N. C.

Sept. 10-12—National convention **AATCC,** Waldorf-Astoria Hotel, New York, N. Y.

Oct. 1-5—19th **Southern Textile Exposition,** Textile Hall, Greenville, S. C.

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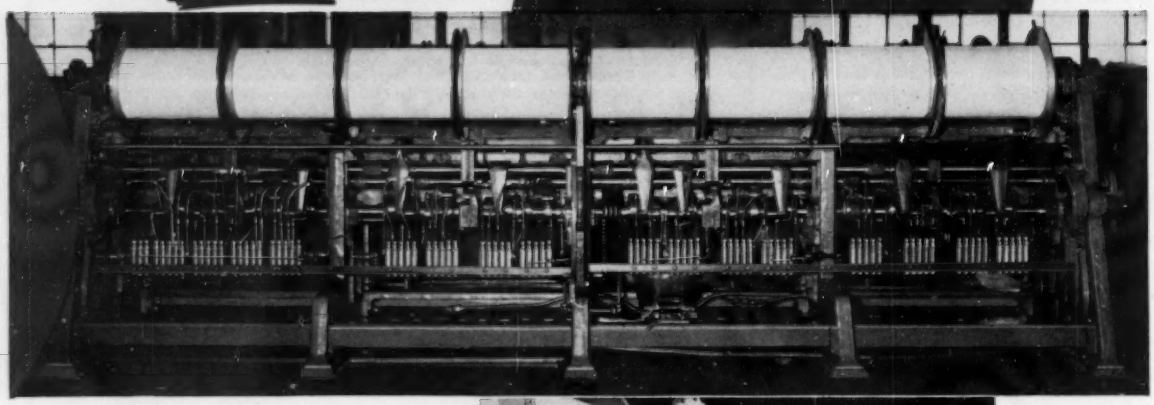

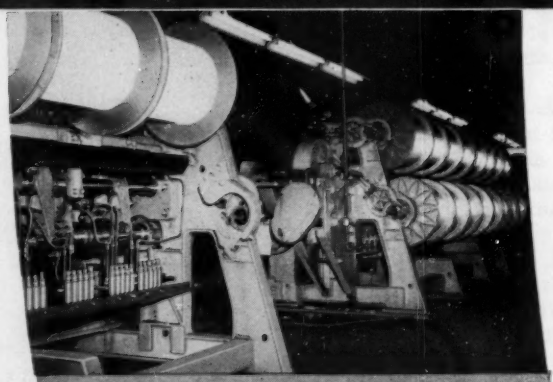

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Chemists and Colorists Convene

Atlantic City, N. J., September 22-24

THE TEXTILE wet processing industry will focus its attention on Atlantic City, N. J., from September 22 to 24, as the American Association of Textile Chemists and Colorists meets at Chalfonte-Haddon Hall for its 34th Annual Convention, under the sponsorship of the Philadelphia Section.

An attendance of at least 2,500 members and guests, making the event the largest in AATCC's history, is expected to be on hand for the three-day program of technical meetings, exhibits, and get-togethers.

A key feature of this year's technical program will be "Atomic Energy Afternoon," at which the AATCC observer's team, headed by Dr. H. W. Stiegler, AATCC research director, will discuss the effect on textiles of the A-bomb tests in Nevada last spring.

Exhibits. A cross section of leading firms in all phases of the textile wet processing industry will maintain booths to display their products or will have representatives on hand to greet those in attendance. Exhibits will run concurrently with the Convention, on the lounge floor of Haddon Hall, through Saturday, September 24th.

A list of exhibitors, with their location in Haddon Hall, is given below for the convenience of textile personnel planning to attend. Members of TI's editorial, business, and circulation staffs will be on hand at Booth No. 49 to be of assistance to you while the exhibition is open.

Ladies' Program. Special events for the ladies are planned for each day of the Convention. The Reception Committee will greet lady guests at a cocktail party on Thursday afternoon, September 22.

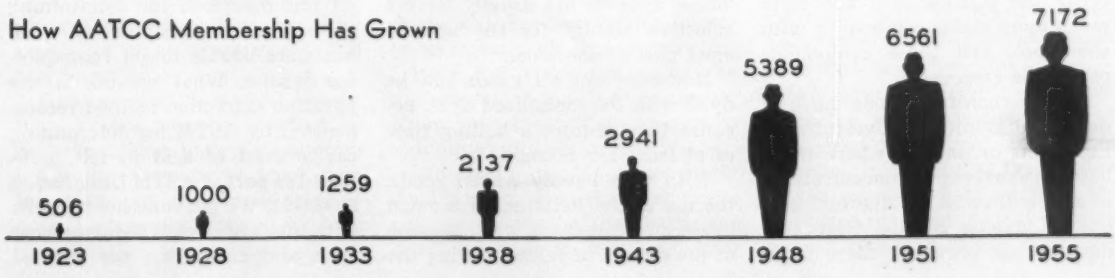
A special feature is a day at the Atlantic City race track, with one race named for the AATCC Convention. A suggested name is "The Dyer's Handicap."

Olney Award. The Olney Award luncheon will be held on September 22, at the Chalfonte-Haddon Hall. This year's winner of the Olney Medal, presented "for outstanding achievement in the field of textile chemistry," is Dr. Miles A. Dahlen, adviser on dyes, intermediates, and related chemicals for the Organic Chemicals Department of the Du Pont Co.

List of Exhibitors at AATCC's 34th Annual Convention

Exhibitor	Booth
AATCC Research Exhibit	55-58
Alco Oil & Chemical Corp.	30
Alliance Color & Chemical Co.	37-38
Althouse Chemical Co., Inc.	10
Amalgamated Chemical Corp.	73-74
American Bemberg	32
American Dyestuff Reporter	5
American Viscose Corp.	31
America's Textile Reporter	4
Atlas Electric Devices Co.	68
Carbide & Carbon Chemicals Co.	41-42
Celanese Corp. of America	52-53
The Chemstrand Corp.	50-51
Clark Publishing Co.	47
Cranston Print Works Co.	48
Curry & Paxton, Inc.	72
Custom Scientific Instruments, Inc.	11
Daily News Record	46
Diamond Crystal Salt Co.	88
Dow Corning Corp.	16
Gabb Special Products	44
Gaston County Dyeing Machine Co.	36
General Electric Co.	71
B. F. Goodrich Chemical Co.	61-63
Goodyear Tire & Rubber Co., Inc.	13-14
Hermas Machine Co.	66
The Hilton-Davis Chemical Co.	93-94
E. F. Houghton & Co.	2
Instron Engineering Corp.	6
International Salt Co., Inc.	35
Kelco Co.	9
Kennett Equipment & Machinery Co.	34
McKiernan-Terry Corp.	45
Metro-Atlantic, Inc.	12
Morningstar, Nicol, Inc.	17
Nopco Chemical Co.	7
Nova Chemical Corp.	18-19
Olin Mathieson Chemical Corp.	29
Pad-Dye Corp.	85
Pittsburgh Coke & Chemical Co.	95
Radiant Heat, Inc.	54
Rohm & Haas Co.	39-40
Sandoz Chemical Works, Inc.	23-24
The Sheffield Corp.	8
Smith, Drum & Co.	1
Testfabrics, Inc.	60
Textile Age	15
TEXTILE INDUSTRIES	49
Textile World	89
United States Testing Co., Inc.	75-76
Versenes, Inc.	27-28
Virginia Smelting Co.	25-26
Wallerstein Co., Inc.	43
Walton Laboratories, Inc.	67
Edwin L. Wiegand Co.	22 & 22A
Jacques Wolf & Co.	33

How AATCC Membership Has Grown



TI Presents a Round-Table Discussion For the Wet Processing Industry

What Causes Streakiness in Wool Piece Goods Redyed After Carbonizing?

A mill which carbonizes wool goods in the piece is sometimes called on to redye certain pieces. However, the goods come out so cloudy and unlevel that it is only practical to redye them in black.

The carbonizing procedure at this mill is to first wet out the goods, using a penetrant, squeeze, and then pass on to the acid pad, where a wetting agent is also used. The goods then go to the carbonizing dryer, whose individual chambers have a rising temperature gradient.

Mill G: If goods are dyed level, are then carbonized, and come out unevenly dyed on redyeing, it is a pretty good indication that the wool has been damaged by the sulfuric acid in carbonizing. The amount of the damage is dependent on time-temperature-concentration factors, and the distribution of the acid in the goods is also an important consideration.

The reason for this damage is that wool forms certain complex compounds with the sulfuric acid of the carbonizing liquor. At the usual carbonizing concentration of 4° Be. or less, most of the sulfuric acid bound to the wool can be removed by a thorough rinse, preferably with the use of sodium acetate.

However, if the acid concentration is higher than 4° Be., or if local concentrations on the goods occur, the sulfuric acid will form much more stable compounds with the wool, and these compounds cannot be removed.

Over-carbonized goods have a decreased affinity for dyestuffs, so that spots or patches where there have been excessive concentrations of acid will resist the dyestuff, and uneven dyeing results. Once this damage has occurred, there is no way to produce an even shade with most dyes, so that the best cure for the difficulty is to prevent carbonization damage in the first place.

First, it is important that the goods to be carbonized are free of soap and fatty residues. If the goods are dry they must of course be thoroughly wet out before steeping in acid, and a good wetting-out agent should be used.

The carbonizing bath must also contain a wetting agent, one that is effective and stable at room temperature.

While sulfuric acid concentrations up to 4° Be. are commonly used in carbonizing, we feel that a strength of 2.5° to 3° Be. is usually sufficient, and the lower concentrations are far less likely to cause damage to the wool.

Care must be taken that the goods pass through the process without any folds or wrinkles where uneven absorption of acid can occur. If vacuum extraction is used, the vacuum slot must not be allowed to become clogged with lint.

In baking the goods after drying, temperatures much above 210 F are not advisable, to avoid the danger of damage to the wool.

Mill H: Satisfactory redyeing of carbonized pieces can often be obtained, even where more or less extensive damage has occurred to the wool, by using metallized acid dyes of the Palatine Fast type. These dyes do not usually have a selective affinity for the undamaged part of the wool.

However, not all goods can be dyed with the metallized dyes, because they require a boiling time of at least 1½ hours.

With very loosely woven goods, the use of the Palatine Fasts must usually be dispensed with, because of the danger of felting during the long boiling period.

Mill I: We use a quick test to detect damage occurring in carbonizing. A sample of the damaged fabric is first stripped with ammonia just under the boil. Part of the sample is then dyed with Anthraquinone Blue B (C.I. No. 1054), with 2 to 5 per cent acetic acid and 20 per cent Glauber's salt. Another part of the sample is dyed with Methylene Blue (C.I. No. 922), with 1 per cent acetic acid.

Over-carbonized parts of the sample will dye lighter than the rest with the acid dye (Anthraquinone Blue B), and darker with the basic dye.

Mill K: We occasionally make tests in our laboratory to determine the acid content of carbonized fabrics. A few small samples taken from different parts of the fabric will show how much variation exists. The method we use was published some years ago in the *Journal of the Textile Institute*.

A 2-gram sample of the carbonized fabric is steeped in 100 cc of distilled water in a weighed flask, 10 cc of 10 per cent pyridine solution is added, and the contents of the flask made up to 150-250 cc with water.

The flask is stoppered and allowed to stand for at least an hour. Suitable aliquots of the liquor, such as 50 cc, are then titrated with 0.1 N caustic soda (reagent grade), using phenolphthalein as an indicator.

Mill L: We have tried the method just described for determining the sulfuric acid content of wool, but were unable to get reproducible results. What we use is the pyridine extraction method recommended by ASTM for determining the amount of acid in felt, published as part of ASTM Designation D 461-53. We get consistent results with this, although it requires more time and care than the method

published in the *Journal of the Textile Institute.*

The chief differences in the two methods, aside from a few more steps in the ASTM test, are that an approximately 1 per cent solution of pyridine is used, prepared in a 2 per cent sodium chloride solution, in the ASTM method, and the pyridine extract from the sample is titrated with 0.05 N sodium hydroxide. It is also advisable, as ASTM suggests, to make a blank determination on part of the unused pyridine solution, and subtract that from the figure obtained for the acid extraction.

How Can the Uniformity of Vat-Dyed Packages Be Improved?

Mill A: This is certainly the $64 question, if I may be permitted to coin a phrase, and one to which all of us would like to have the complete answer. I could perhaps end my part of the discussion right here by saying that any constructive action taken during the whole dyeing process will improve the uniformity of the final result.

But seriously, there are precautions which can be taken at every step in package dyeing; and while oftentimes no one of them will have a startling effect on uniformity, in sum they can make a very great difference.

Take vat dyestuffs, for instance. They are available as pastes or powders, in various particle sizes, and in different concentrations. Two dyestuff samples from different manufacturers may be theoretically the same, that is, have the same Colour Index or prototype number. But I can assure you that if you dye two lots of yarn with the same amount of each dye, with exactly the same dyeing procedure, any bookmaker with dyehouse experience (if you could find such a person) would give you long odds that the results would be anything but alike.

And another thing, while the people who write the textbooks on vat dyeing usually divide the vats into four classes according to their general dyeing characteristics, let's not forget that vat dyes are individuals, and that each requires its own dyeing procedure for best results. This may sound like an elementary precaution, but I've seen a lot of yarn ruined when it was forgotten.

For example, it is well known that, in the pigment method of package dyeing, high pigmentation temperature promotes level dyeing. However, the shade of some vats is adversely affected by high pigmentation temperatures, or an undesirable effect on other properties (fastness, for instance) is caused. Vats of the Ponsol Blue BCL, BCS, BF class are an example. But for these latter, pigmentation can be done at 140-150 F if penetration or levelness requires. In this case, use the lowest practical dye bath volume, and lower the bath temperature with cold water before reducing with caustic and hydro [or ice can be added—see TEXTILE INDUSTRIES for August 1955, pp. 98-99]. The temperature while reducing and dyeing can be as high as 125-130 F without serious effect on the shade or chlorine fastness of these dyes.

The condition in which your dye goes into the bath is also an important factor in getting uniform dyeings. I'm referring to the particle size of the dyestuff, which should be as small as possible. Paste-type vat dyes are preferable to powders in this respect, since they are usually better dispersed. But don't forget that pastes which were of ultrafine particle size when they left the dyestuff manufacturer's plant may agglomerate during long storage. So be sure that your dyes are well dispersed, and *always* add them to the bath through cloth or a fine-mesh sieve.

Another point — when you're matching shades, choose dyestuffs of the same exhaustion rate, or at least reasonably similar, or you are quite likely to wind up with unevenly dyed yarn. Along the same line—choose dyes of approximately equal fastness, and the shade you dye won't later undergo an undesirable transformation.

Rule No. 1 for improving the uniformity of vat-dyed packages: Know your dyestuff and respect its individual idiosyncracies.

We dyers usually have pretty good control over the first major component of the dye bath—the dyestuff—and if anything goes wrong there the blame is rightly laid squarely on us. We too often have little or no control over the other major component—the yarn —although we have complained since time immemorial that we are supposed to cover up everyone else's mistakes while adding none of our own.

If anyone from the winding department sees this, let me repeat for the nth time: you make the dyer's job a great deal easier when you wind the package properly. What is a "properly wound" package? Well, it's easier to describe what a properly wound package is *not.*

A properly wound package is not too soft. The dye liquor will take the path of least resistance ("channeling") through a too-soft package, so that all parts of the package will not be equally dyed.

A properly wound package is not too hard. Liquor flow is impeded through hard packages; in fact, I've seen packages so hard that it was practically impossible to pump any dye liquor through them at all.

The natural question is, "What is the correct package density?" That's difficult to answer with hard and fast rules. Like the military axiom that "it depends on the situation and the terrain," package density depends on the yarn. Experience is the best guide. If you're dyeing a yarn for the first time, make some sample dyeings of packages with different densities, and use the one that works best. Density can be measured with a Densimeter, the readings correlated with dyehouse results, and standards set; or you can judge it by feel, as we do.

Whatever the correct density, we want the whole package to be of *one* density, without large differences from core to the outside of the package. And we want all packages the same density—softly wound packages among compara-

tively hard-wound packages will dye a darker shade.

We also want the correct winding angle, and want hard-twist yarns wound on a softer package than low-twist yarns.

Most packages have a tight or hard edge at the ends because of yarn build-up at the end of the traverse on the winding machine. However, these can be broken down with a package-forming press or cupping machine to round off the sharp ends (known as "crimping" or "shaping").

Mill B: While we're talking about packages, I'd like to emphasize that a knitted or paper sleeve (we prefer a knitted one) over the dye package is a big help toward uniform dyeing, as well as performing several other useful functions. Probably its most important purpose is to supply a cushion for the first few layers of yarn next to the tube. The dye liquor moves along the sleeve by capillary action, and so gets to the portion of the yarn which is pressed against the tube between the perforations.

The sleeve also filters out any large particles, and reduces the velocity of the dye liquor and distributes its flow evenly throughout the package. You'll have fewer "white spots" when you use a sleeve on the package.

Our friend from Mill A spoke about the two major components of the dye bath—the dyestuff and the yarn. There is of course another major component—the water—and it certainly requires some consideration in any discussion of uniform dyeing.

If you are blessed with a naturally soft supply of water, you are lucky; most of us have to soften our dyehouse water, or at least use a sequestrant. This is particularly important during periods of drought, such as we had in most parts of the South during the summer of 1954, because the concentration of calcium and magnesium salts is appreciably higher then.

Mill C: From the foregoing, I gather that the things we put in the dye bath other than dyestuff, yarn, and water are not considered of "major" importance in determining uniformity. I know that you didn't mean that, and that you will agree that our dyeing assistants—for wetting, dispersing, retarding, leveling, and exhausting; and our reducing and oxidizing agents—are certainly "major" components, even if we only use a few ounces of some of them.

These chemicals must be selected with the same care as dyestuffs, and not all chemicals are equally effective with all dyestuffs. Some may work perfectly well with one dyestuff, but be incompatible with another dyestuff and cause it to precipitate. In a new situation, only a sample dyeing can give you the information you need.

Some tips on these chemicals: Select agents for wetting, dispersing, and leveling in pigmenting to provide a surface of foam in the expansion tank, as protection against rapid or excessive oxidation caused by splashing. Some commonly used agents hold appreciable amounts of oxidized color in the foam, which may cause specky results if the particles are not easily reduced in the dye bath.

Be careful in choosing retarding agents—some can cause shade changes, and others will reduce color yield. There are many synthetic retarding agents available, and they do a good job, but animal glue and lignin sulfonate are still hard to beat.

The salt used for exhausting is often taken for granted, but if it contains magnesium or other cations as impurities, precipitates can be formed.

Mill D: In an earlier part of this discussion, the representative from Mill A complained, and rightly so, that we dyers too often have little control over the state in which the yarn arrives at the dyehouse. As far as the quality of winding is concerned, it's true that we rarely can do much about it. However, the way we handle the yarn after it arrives in our bailiwick, and I refer particularly to the way we scour it, can go a long way toward improving the final dye uniformity.

We handle coarse yarns, and they contain considerable quantities of natural waxes, grease, soluble pectin, and salts; if we don't remove all this foreign matter we don't have a hope of getting a uniform dyeing. Of course, if you are handling bleached or mercerized yarns you don't need to worry about a scour; a good wetting out is enough.

But don't go overboard—the boil-off doesn't have to be so severe as to completely saponify all the grease and wax. This will result in harsh yarn, and excessive loss of weight.

With our low-quality yarn, we drain and rinse after scouring, because large quantities of foreign matter have been removed and we don't want them in the dye bath (our scouring liquor is an orange color from the large amount of foreign matter in solution or suspension). With higher quality, or bleached, or mercerized yarns, it may not be necessary to drain after scouring. However, if a high scouring temperature was used, you may have to drain and refill to reduce the temperature to that required for the start of the dyeing.

Another problem that I believe is of more concern to us dyers handling coarse multi-ply yarns is "cross-overs," or undyed places where the yarns cross each other in the package. We dye large quantities of 8s/4 and 10s/5 used in tufting, and unless we are very careful we get undyed cross-overs in the outer layers of the package, about ⅛ to ¼ inch in depth. These are caused by the dye liquor bypassing the tight places in favor of the "voids" present in the outer layers of coarse-yarn packages. We don't usually find cross-overs any deeper, because of the resistance built up by the wet yarn.

However, you can get cross-overs in the inner layers if no sleeve is used, where the yarn presses tightly against the tube. The circulation is restricted where the threads cross. This occurs where there is lack of back pressure in the system when the circulation is outside-in. You will rarely get cross-overs on the inside of packages wound on ⅝-inch tubes, since an appreciable amount of back pressure is present because of the limited number of perforations in a small-size tube.

Our finding, which I believe is confirmed by other dyers, is that cross-overs occur most often with the rapidly exhausting vats; most

of the slowly exhausting vats don't give this trouble. The higher temperatures and greater caustic concentration used with the rapidly exhausting vats is probably part of the reason. In line with this, we rarely get cross-overs with direct and sulfur colors, because they are absorbed more slowly.

One final point on uniformity—it's something you can't get without adequate liquor flow through the packages, a minimum flow of about 3½ gallons per minute per package is necessary. Liquor flow diversions can occur between the pump and the packages, caused by worn or loose-fitting reversing valves, pipes and spindles of insufficient size or improper design, or packages not compressed enough at the spindle. This latter condition allows circulation to be excessive at the loose points, with not enough through the package.

Is Anything New Being Done In Wool Printing?

Mill S: Yes. We are printing on four-ounce woolen goods. This is new in that we've developed the art of handling such light goods, are printing on Sanforlan processed cloth, and have styled our fabrics for the dress fashion trade rather than as staples.

We select colors and print them in much the same way as we do for silk goods. That is, we use acid colors. We choose these colors for light fastness of a degree that is equivalent to fastness required for rugs.

To date we've done this work with screens only, but will soon go into roller work. We've used as high as 14 screens, and printing is application work with some over-printing done on woven stripes.

Wool seems to lend itself to over-printing. The hand of the goods, as in any printing, is dependent to a large extent on finishing (steaming and washing). Within the limits of the effectiveness of this finishing, printing does not affect the hand of the lightweight woolen goods any more than does dyeing.

How to Remove Rust Stains from Cotton Fabrics

TI's editors received a sample of cotton toweling, such as is manufactured for the linen supply houses, which came from the loom with spots in the selvage, identified as presumably "oil" or "rust" or "iron." These stains did not come out in the bleach.

To remove, goods were then padded with 3 per cent sodium bifluoride with a soap penetrant at 165 F. The goods were delivered into a stainless steel box. Result: the toweling was badly stained with what appeared to be further contamination of iron, which seemed to be on the goods in very much the same pattern as the contact of the fabric with the stainless steel box.

Mill E: Our laboratory has examined the sample of toweling and determined definitely that the brown stains are iron. However, the fact that they are iron stains does not in any way indicate how they might have gotten in. In our opinion, the pattern of the stains shows that the toweling has been held in contact with some surface from which it could have obtained iron.

The bifluoride treatment would certainly act to dissolve any of the iron that was present before the treatment, and as a matter of fact will dissolve the iron that is present in these particular stains. However, it should be noted that sodium bifluoride is acidic in nature and under certain conditions can cause pick-up of iron-containing materials with which it is in contact.

In general, when materials such as sodium bifluoride or other acidic compounds are used for removal of iron, the material should be rinsed out immediately once the iron has been taken into solution. Most particular care should be taken that in the rinsing process the cloth is not allowed to become neutral or alkaline until it is thoroughly rinsed. Particularly if it becomes alkaline, the iron will be reprecipitated.

With complexing agents such as oxalic acid or citric acid, the iron will not be as readily reprecipitated. Even better, a sequestrant can be used, which will hold the iron in solution up to a pH of about 11 or 12, so that it may be rinsed with dilute soda ash without fear of reprecipitation.

As to the goods being delivered into a stainless steel box: anyone who has had experience with "stainless" steel knows that there are a great many odds and ends of conditions under which stainless steel will corrode and the iron from it go into solution. Furthermore, certain batches of steel may have a tendency to do this, while a normal stainless steel of the same composition (as near as they can get it in manufacture) may not.

We have even had stainless steel size kettles which rusted, although the pH never gets below 5 or 5½ with starch solutions.

One thing should be noted; that is, if there is no evidence of iron stains on the cloth when it is removed from the stainless steel box, the iron is in solution if it is on the cloth. Therefore, it can be washed out if the pH of the washing solution is kept similar to that of the cloth. We would suggest, for instance, a rinse with acetic acid. Another system would be as mentioned previously—the use of sequestrants in the solution which, once the iron has been dissolved by the bifluoride, will hold the iron tightly in the solution through their complexing action.

The sodium bifluoride treatment is probably the most rapid, but normally we prefer to use a mixture of oxalic and citric acids, which are rather mild acids and which can be washed out more readily in such a manner that they will take the iron with them.

In any event, it should be noted that the cloth must be prevented from coming in contact with alkaline solutions unless sequestrants are used up to the point where the iron is completely washed out.

Mill F: Our usual treatment for

iron rust removal is to run on the jig with two pounds of sodium bifluoride and two pounds of oxalic acid at 140 F. This is usually preceded and followed by a soaping operation, using alkali in the second soaping to be sure that the goods are completely neutralized.

In this case, the sodium bifluoride must have dissolved iron from the stainless steel box just as it dissolved iron in the cloth. If it could be piled in a wooden box and left for some time and then rinsed, this difficulty might be removed.

It has been our experience that iron stains cannot be removed rapidly enough for the operation to be done on a continuous soaper, or by any continuous method; we now do such treatment on a jig, giving a sufficient number of ends to remove the spots.

What Is the Difference Between White Fiber and Colored Fiber Bleaching?

Mill P: White wools for the most part need a bleaching that will bring them back to white from a stained condition, such as from urine or dirt, or processing discolorations. This can often be done with a weak bleaching or a good scouring.

Removing color from a wool or specialty hair fiber involves bringing that fiber from a black to a gray to a white, or from a brown to a tan to a fawn to a white. This is a tough job because if bleaching is too severe, linkages in the fiber will break down and no amount of after-treatment, such as oiling, will bring the strength back again. On the other hand, bleaching must be sufficient to remove the color.

What Methods Are Used to Bleach Colored Wools?

Mill Q: We use either a peroxide or a catalyzed peroxide bath. Catalysts used are iron or cobalt, and we use them when a particularly heavy bleach is required, such as is the case in bleaching rust-stained fiber.

Mill M: We've been using peroxide without trouble for quite a while on pigmented wools, but recently have run into trouble on cashmere with bleach spots. Right now we're investigating other methods, also the possibility in our peroxide method of faulty chemical batches, bad formulation, human element, and stock variation.

How Can the Shrinkage Problem of Tubular Knit Goods Be Solved?

Mill T: There are many factors which influence the shrinkage of tubular knit goods. The most important ones can be listed as follows:

1. Construction
2. Mechanical treatment
3. Chemical treatment

Of primary importance is the construction of the fabric. There is no question that the new man-made fibers offer new opportunities to produce knitted fabrics with good stabilization. These new fibers have much less inherent shrinkage than the old ones, such as rayon.

Especially after setting the fabric, shrinkage can be reduced to a minimum. The type of yarn and the type of knitting also has a bearing on the results.

Mechanical treatment in dyeing as well as in finishing can either relax or distort the fabric, and has a great influence on the shrinkage. Specially constructed machinery for the finishing of tubular knit goods, such as the "Tub-tex" calender, padder, and dryer, allows treatment in more or less relaxed condition and helps a great deal to reduce shrinkage.

Setting treatments with heat or steam, or both, set fabrics made from the new man-made fibers, while the cellulosic fabrics require a resin treatment for best results.

What About Application of Silicones on Wool? How Do You Feel About a Curing Temperature of Over 250 F?

Mill M: Several houses are making silicones now that make it easier for mill application. Dow, Arkansas, Cravenette, Warwick, and others are putting out a new silicone that can be applied without a catalyst and can be cured at low temperatures. We did have a problem with this curing when curing temperatures were up around 300-325 F. That temperature was too high for the wool; we got scorching and color changes. Now, we cure at 225-250 and have no problems.

The procedure for silicone application is simple and involves no particular headaches: the goods are padded, dried, and cured.

One thing to be very sure of is to avoid decating a cloth after applying a silicone. This tends to remove the silicone and its corresponding benefits to the cloth.

Do You Detect Any Change in Hand of Woolen Goods Treated with Silicones?

Mill O: We feel that we need more experience with this one before answering yes or no. Silicones are a big field, relatively new, and are subject to infinite variation in application. A suit made from silicone treated cloth is now being wear-tested by one of our people.

Mill N: The work done in our dyehouse with silicones has been highly successful, in answer to this question. I would say that we've been able to make a more mellow, drapable cloth through silicone application. The hand is a "cashmere" type thing. It is the lubricating effect on the fiber that causes this hand enhancement.

Attention Wet Processors

Dyers, finishers, and other wet processors will find articles of interest to them throughout this issue of TI. Check table of contents on page 3.

Abstracts of papers presented at the AATCC Convention, and abstracts from the Cotton Chemical Finishing Conference to be held in Atlantic City immediately preceding the Convention, will appear in an early issue of TI.

How Do You Handle Wool and Synthetic Blends in Wet Processing?

Mill M. Wool-Dacron has been one of our big mill production blends. We consider the two-bath method best, and it might be well to point out a very important point in doing this type of work: prevention of crocking.

In this method the Dacron is dyed first. The goods are run in a carrier such as a paraphenol or orthophenol. Selection of the carrier depends strictly on local conditions. The dye (disperse acetate) is then added and the Dacron in the blend is dyed at the boil.

The next step—scouring—is very important. Care must be taken to give the goods a good caustic soda bath to remove all of the acetate dye from the wool. If you don't, the finished goods will crock no matter what after treatment you give them.

The properly scoured goods are then run in an ordinary manner in a separate bath containing the wool dye and rinsed. The resulting job should be uniform and fast to wet and dry crocking.

Mill N: We've been dyeing wool-Vicara blends without using any special procedures. We use a selected group of union dyes and apply them at high temperatures (200-212) at pH 2.5 - 3.5 using formic acid for the buffer.

The dyes used include acid dyes, metallized dyes, and some chrome colors.

We've been getting good unions in 50-50 wool-Vicara blends and are also doing some Vicara-viscose.

Another wool-bearing blend we're doing contains as many as four fibers: a 60-40 viscose-wool blend in the ground, and acetate decoration stripes. The stripes are either grey or alcohol (resist) dyed, or both.

The ground is union dyed and the stripe, except for a resist stripe, is cross dyed. This cloth is used for sportshirting and must really stand up under some fastness tests.

Since these requirements can vary, and because our selection of dyes depends wholly on the fastness required, there's no point to going into dyestuff selection here. Some of these requirements are: 20-hour light fastness, complete washability, and fastness to acid and alkali staining (perspiration).

Mill M: Getting back to wool-Dacron, another point to watch is pilling. This, contrary to popular opinion, can be controlled by singeing without forming a harsh hand due to beading-up. In plate singeing, beading can be avoided by keeping the heat down; in flame singeing, adjust the flame so it is low enough to remove surface hairiness without beading.

There are some other ideas we have about doing this wool-Dacron job. Color fixing, an anti-static agent, and the Dacron dye can be applied in the same bath but our feeling is that the only way to make the job right and keep it in control with a minimum of "outs" for the dyer is to do only one step at a time, making spaced adds rather than to make up all three in one bath.

Speaking of anti-static agents, we prefer to put them in on the final rinse. These compounds, usually wax emulsions, are good lubricators, and are effective in preventing cutting-up and sewing troubles. Sometimes it is advisable to apply the anti-static wax on a pad before drying.

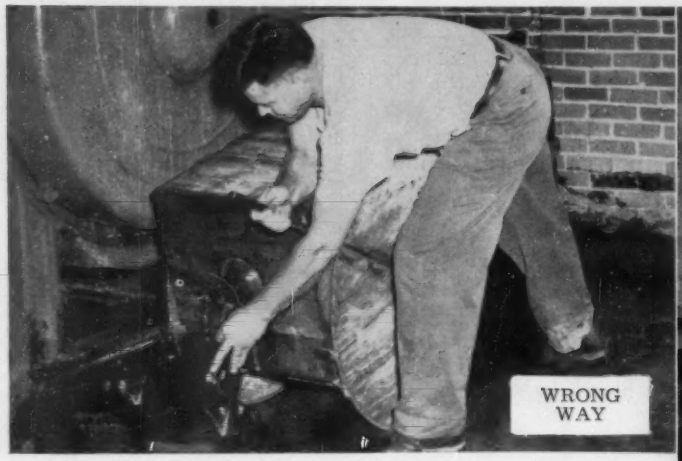
Softeners are good to use on Dacron blends in general; they eliminate harshness and dryness of hand and can be varied to conform to the end result desired. For instance, for a tropical they should be varied to produce a crisp hand; for sportcoating, a very soft hand.

In this whole wet processing picture, our guide to proper manufacture is, "Would I wear it?"

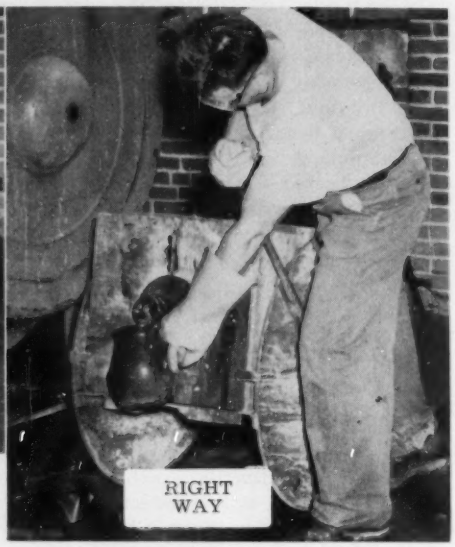
Mill O: In running our wool-synthetic blends, all of which are stock dyed, we'd naturally feel that the ideal situation is to start with dope-dyed synthetics. Our major blend, wool-Dynel, is made this way whenever possible; when it isn't, we stock dye the Dynel in standard stock-dyeing equipment, although we feel that pressure dyeing is the ideal method for this fiber.

The thing to watch with this blend is heat: If we get too high with it, plasticizing takes place.

Right Way and Wrong Way to Handle Sulfuric Acid



Dye house operator shows wrong way to pour acid; no gloves, no goggles, no eye sight.



Correct way is to treat acid with respect; wear rubber gloves and goggles.

Vat Dyes Can Be Successfully Stripped

BY EDWARD A. MURRAY
Chemical Engineer

EXCLUSIVE

IN VIEW of the variation in dyeing characteristics of textile materials and the difficulties in maintaining strict control at all stages of processing, it is almost inevitable that, even in the best-operated dyehouses, defective dyeings will occasionally be produced. Unlevel dyeings, as well as wrong tones and depths, are particularly troublesome in the dyeing of vat colors because of the great difficulty encountered in stripping to a sufficient degree to permit a satisfactory redyeing, particularly in light shades.

As in most stripping processes, the best approach to the removal of vat colors is to treat the fabric in a bath containing a powerful retarding agent, with the dye reduced to its soluble leuco form. Under the right conditions, the retarding agent, in solution, will have a greater affinity than the fiber for the reduced dye. Because of their dye affinity, such retarding agents have frequently been termed "liquid fibers."

Until relatively recently, the most widely used retardants for vat dye stripping were two classes of ethylene oxide condensation products; nonionic and cationic products have both been used successfully. A well-known nonionic is Peregal O, the condensation product of ethylene oxide with a fatty alcohol; typical of the cationic materials is Peregal OK, which has been described as a "methyl polyethanol quaternary amine." In practice the fabric is treated at temperatures near the boil in a blank vat bath containing from 0.5-2 ounces per gallon of this type of material.

A great improvement in vat color stripping has been made possible by the development of a new polymer, polyvinyl pyrrolidone (PVP), the product of Dr. Walter Reppe's fundamental research in Germany on acetylene chemistry. This polymer has several unique properties not found in other resins, which have led to widespread acceptance in a number of fields, some of them far removed from textiles. It has a strong tendency to form stable, water-soluble complexes with a great variety of chemicals, and this tendency is the basis for its usefulness in the medical field as an agent for slowing down and prolonging the effect of many drugs. The combination of PVP and iodine, for example, is an excellent antiseptic, but no longer has the objectionable irritant qualities of iodine alone.

It is quite likely a similar complexing reaction with dyes that renders PVP such a desirable stripping assistant for many classes of dyeings, including those of the vat type. The water-soluble complex between the polymer and the leuco dye molecule is so stable that there is little or no tendency for the color to redeposit on the fiber. Stated more simply, the color has a stronger tendency to "dye" the water-soluble polymer than the cloth.

In practice, the usual procedure is to treat the fabrics to be

stripped in a blank vat bath, containing approximately 0.7 ounces of a commercial 30 per cent solution of the polymer (sold in this country under the trade names Peregal ST and Albigen A) per gallon. After treatment for 30-60 minutes at 165-195 F in the stripping bath, the material is rinsed in a dilute hydrosulfite solution and finally with cold water. A typical stripping formula is given:

Component	Oz. per Gallon
Caustic soda	0.8
Sodium hydrosulfite	1.6
Protective colloid-lignosulfonate type (Retardine, Dekol NW, etc.)	0.7
Polyvinyl pyrrolidone - 30% (Peregal ST, Albigen A)	0.7

Raise the temperature to 165-195 F over a period of from 30 to 45 minutes, and maintain at the highest temperature for an additional 30-60 minutes. Rinse first in a bath containing 0.45-0.50 ounces of sodium hydrosulfite per gallon, followed by a second thorough rinse in cold water.

Watch These Danger Areas When Preparing Emulsions

STAFF INTERVIEW

EXCLUSIVE

PIGMENT colors are the simplest of all to prepare for printing. The most commonly used type, water-in-oil emulsion, is mixed from two ingredients: a color concentrate containing pigment and binder, and the clear concentrate containing emulsifying agent and some binder.

The plant simply adjusts to the most convenient printing viscosity with water, and prepares the emulsion. Printers should and usually do follow chemical company instructions in doing this job.

Preparation Can Be Tricky. Because preparation of an emulsion can be tricky, and because an improperly prepared water-in-oil printing emulsion will separate out, certain precautions should be taken. They concern elimination of variables: Chemical, mechanical, and human, which can throw off prescribed directions for ingredient volumes and mixing.

Standard Procedure. As illustrated in the accompanying drawing, the clear concentrate is first diluted to printing viscosity; this diluted clear functions as does a thickener in preparing a print paste from any of the color classes generally used on cotton.

The diluted clear is prepared by mixing the concentrate with an emulsifying agent. In water-in-oil pigment printing the agent is water. The two ingredients are mixed at high speed in an elevated tank, and the diluted clear is drawn off as needed into mixing tubs (these tubs are often made in the plant by cutting a wooden barrel in half across its horizontal axis).

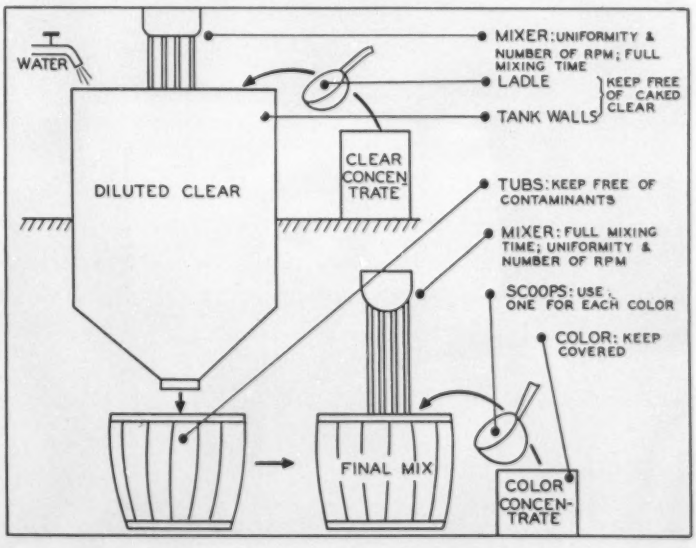
Color concentrate is then added to the diluted concentrate in the tub (while mixing at high speed) until the shade is reached and the emulsion is uniformly dispersed.

Danger Areas: Diluting The Clear. Since water is actually a thickening medium when combined with the clear concentrate, the diluted concentrate tends to cake up on measuring ladles and mixing tank walls.

If such caking is allowed to collect on ladles, it will displace some of the clear concentrate which it is supposed to be measuring out. In transferring several half-gallon ladles full of clear concentrate to a 200-gallon mixing tank, if ladles are caked then enough clear can be displaced to throw ingredient volumes off. This can be avoided by keeping ladles in a solvent (mineral spirits) when not in use.

Another source of poor reproducibility in volumes is tank caking. This caking should be removed by scraping; once a year, just before vacation shut-down, is sufficient.

The high speed mechanical action of the electric mixer used in the diluted clear is responsible for the completeness and uniformity of the emulsion. Mixers should be checked periodically for accuracy and speed. Operators should not



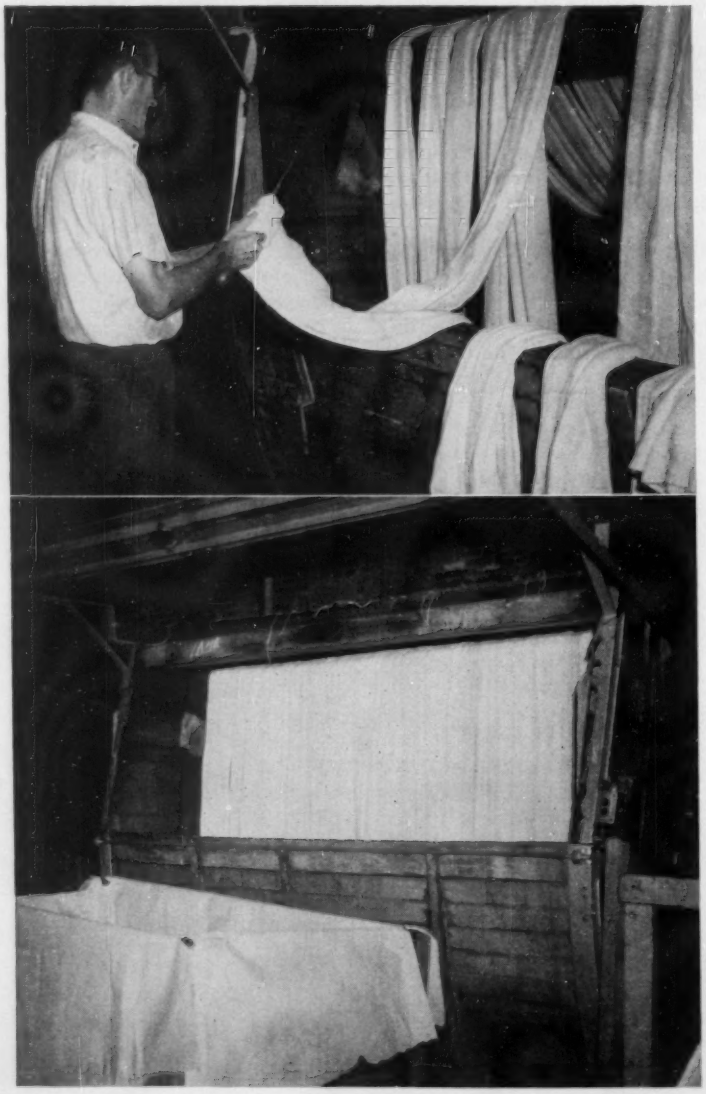
take time short-cuts in mixing.

Danger Areas: Final Mixing. Print paste mixing tubs must be used to mix more than one type of color. In the average print works these tubs must be used for the entire range: Stabilized azoics, soluble leuco vat esters, vats, pigments, and aniline blacks. Tubs must, however, be kept free of contaminants. This is particularly true when both water-in-oil and oil-in-water pigments are prepared. A high speed water spray will properly clean water-in-oil emulsions from the tubs in preparation for their use for oil-in-water emulsions.

In transferring measured scoops of color concentrate into the mixing tubs, it is a good mill practice to maintain a separate scoop for each color. Again it is wise to keep scoops in solvent when not in use. Color concentrate containers should be kept covered when not being used in order to minimize drying out of contents.

Mixing time is quite important in final mixing; good printing depends on getting the smallest uniform particle size possible. Again, the mechanical operation of the mixer should be checked regularly to assure its proper performance.

You Can Dye Big Orlon Sweater Lots



STAFF PREPARED EXCLUSIVE

A METHOD of dyeing yard goods and ribbing in the same bath on an enclosed dye beck "over-the-reel" in lots up to 750 pounds has been developed by T. A. Harris Co., Inc. (Continental Dye Works), Philadelphia, Pa., in conjunction with Darco Knitting Mills of the same city.

This work, being done on Orlon interlock intended for sweaters, offers the advantages of less cutting waste and more uniform lots delivered on a roll, compared to box dyeing of the garments, where the maximum dye lot possible is 15 to 20 pounds.

The dyehouse, in its 100th year of operation, specializes in wool jersey; dyeing the Orlon for sweaters in this manner was an outgrowth of the basic method used for that type of goods.

Knitting. Darco started with a 1/30s (worsted count) Type 42 spun Orlon at 15 stitches per inch in the yard goods, but discovered that this construction, plus some elongation in dyeing, influenced the width and appearance of the cloth. To eliminate sleaziness and to compensate for the stretch (width) condition, the stitch was

←

JOINING STRINGS (top) in scouring kettle, dyer prepares a 16-piece load for first wet process. Scouring both yard goods and ribbing in the same bath (bottom photo) is done according to standard method for Orlon 42. Temperature control is a must.

tightened up to 17½ per inch and the yarn increased in weight to a 1/27s.

Along with the yard goods for the bat-wing bodies, proper proportions of two kinds of ribbing accompany all yard goods dye-orders. This circular knitted ribbing is used for cuffs, collars, and skirt trim. Depending on the style, the two ribbings, which vary in the length divisions, are used for various combinations of these trim requirements. The yard goods are actually knitted in 90- to 100-lb pieces and cut in half for easier manipulation in dyeing and cutting.

Preparation for Dyeing. Incoming bundles of yard goods and trim are split for ease of handling or by color assortment and are then rebundled; they are at the same time given an identifying piece number.

Scouring and Dyeing. These operations are done according to standard procedure for dyeing Orlon 42; usual string lengths measure about 80 yards.

Temperature control to a constant is of utmost importance in these steps. It is in the pull of the string out of the bath by the reel that the stretch occurs.

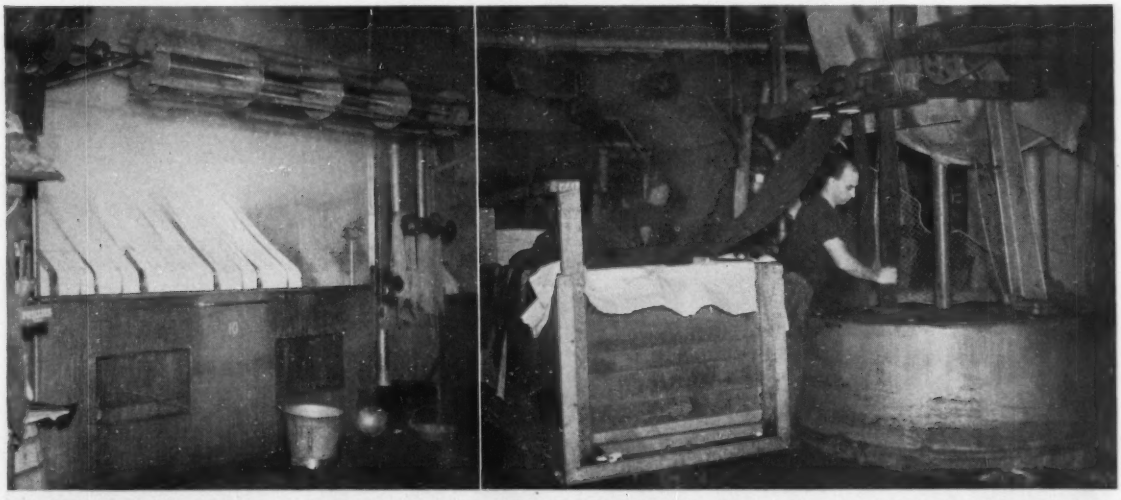
Goods are extracted after dyeing.

Drying. First work with drying these goods at Harris was done on their Utica dryers in the same way as is standard for wool jersey. It was found that the nature of the Orlon caused a soft roll-up on the sand roll at the delivery of the dryer.

This method was abandoned in favor of looping the goods over the poles of a Bailey dryer for an intermittent drying cycle of 40 minutes. Air drying in a heated room is also used to overnight-dry, or to partially dry some of the cloth.

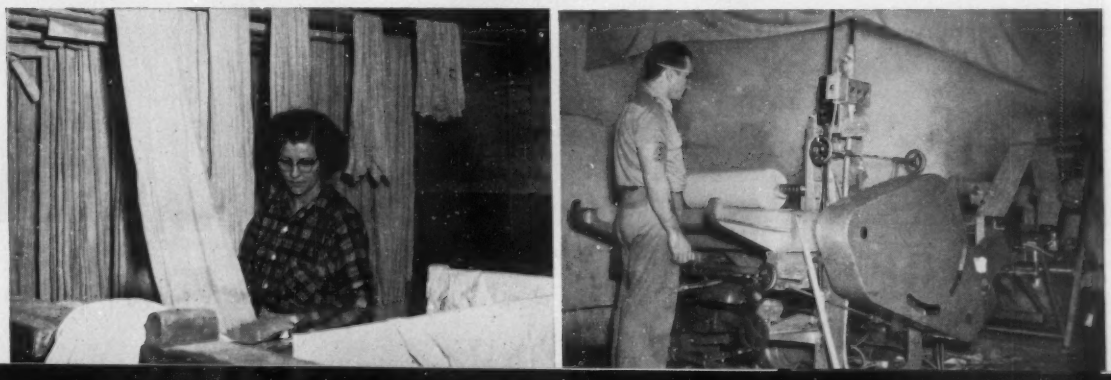
Finishing. All finishing is done on a Tube-Tex tensionless calender. This machine is operated with somewhat more personnel and care than normally expected: an additional tender has been added to the feed end for inspection purposes to bypass that operation after finishing, and a preliminary pass through the calender is made to straighten the goods; the double run-through reduces the "line" type of finishing defect.

This type of finishing provides the dyehouse's customers with cloth ready for the cutting table. No additional steaming or finishing is ordinarily required after the goods leave the finishing department of the Harris plant.



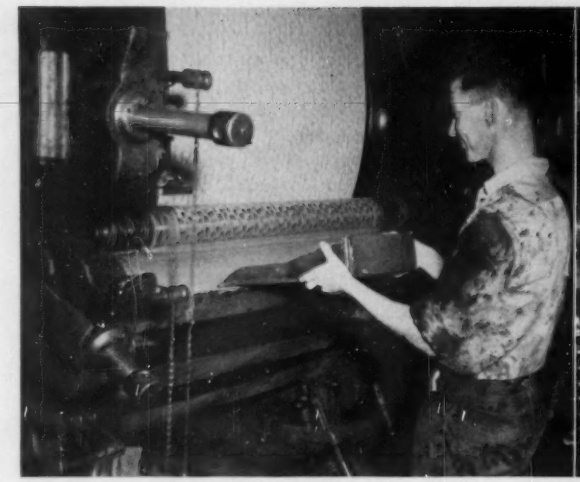
DYEING (left) must also be temperature controlled to a fine degree. The pull of the goods out of the bath and over the reel causes some stretch which must be compensated for in knitting. Extracting (right) precedes finishing. Here, a double string is loaded into the whizzer.

DRYING is done in a Bailey dryer. The cycle is 40 minutes. Goods are shown here (left) being loaded onto the poles of the dryer. Finishing on a tensionless calender is done in two steps. The first (shown at right) untwists the goods. Goods are inspected at the feed end at the same time. Second pass completes the job.

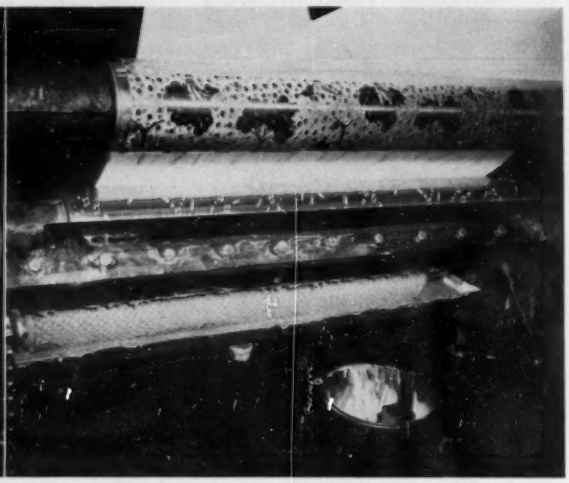


7 Tips for Better Print Room Operation

TEXTILE INDUSTRIES *staff photos, courtesy Santee Print Works*

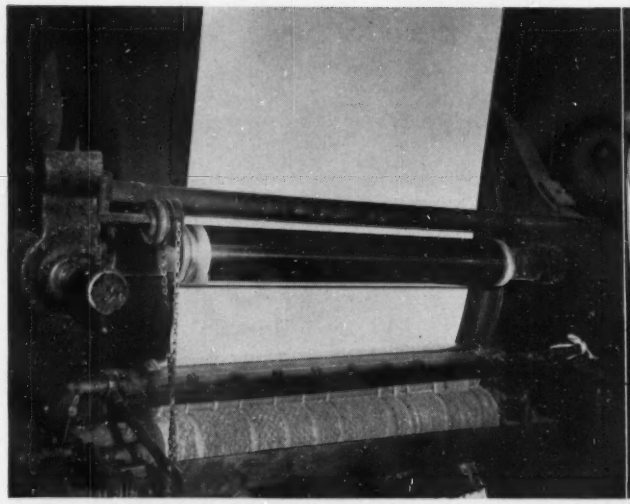


FEED COLOR EVENLY into box to prevent side-to-side shading.



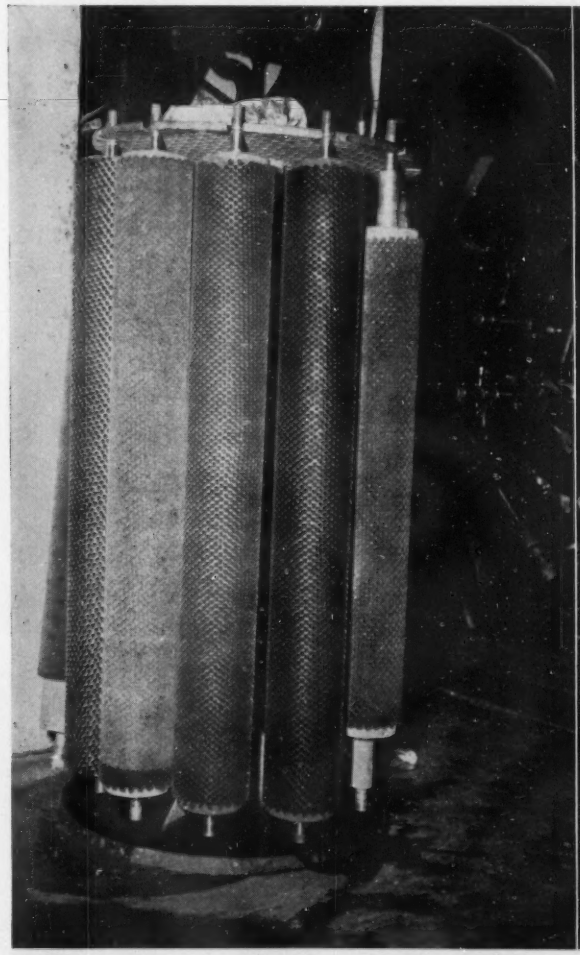
KEEP DOCTOR BLADE LEVEL on rollers to minimize chatter and miscleans.

USE A SCRAY to reduce down-time when changing white rolls.

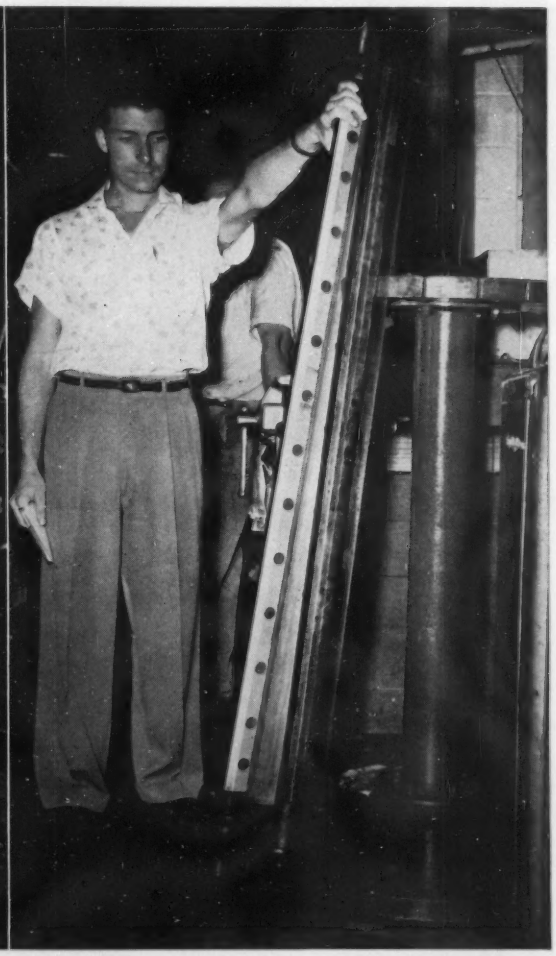


GUARD FIRST NIP on printing machine to prevent accidents.

USE STRAIGHT EDGE in checking the edge of a doctor blade.

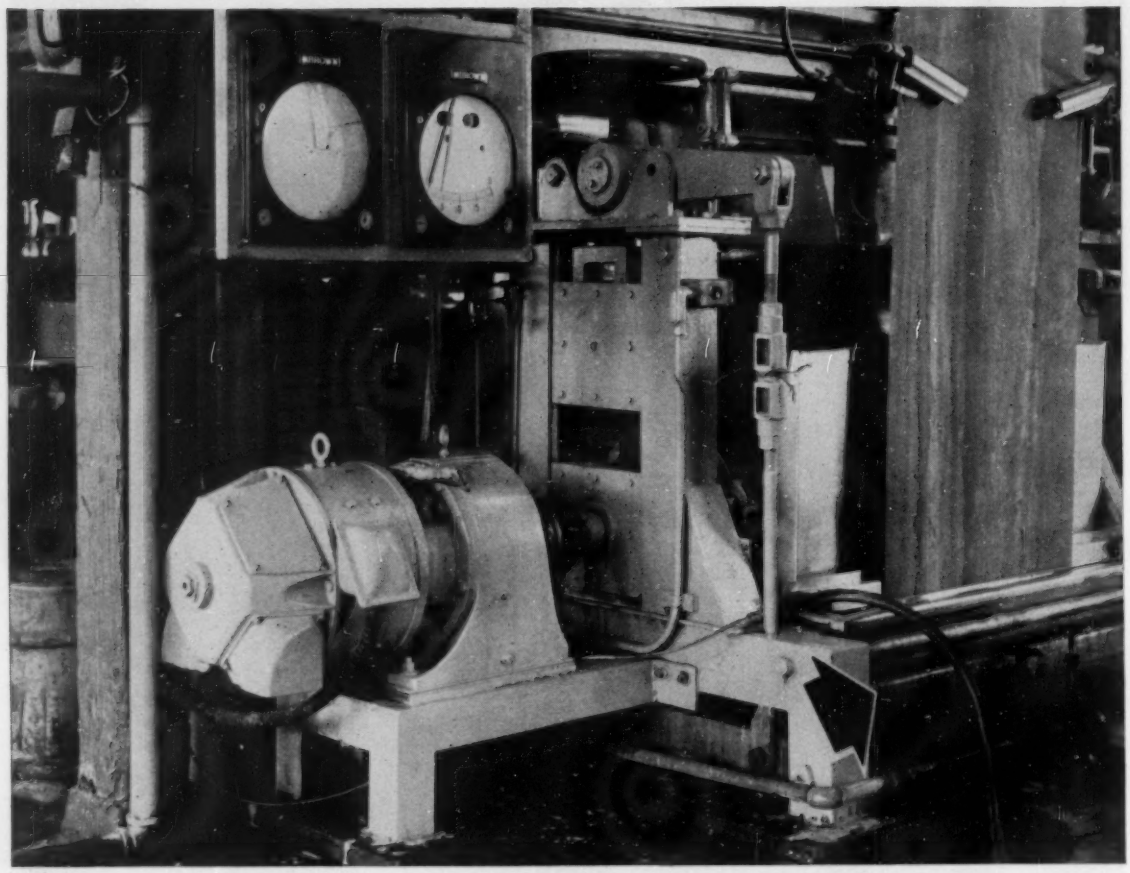


KEEP EXTRA FURNISHER BRUSHES to decrease wash-up time between combinations.



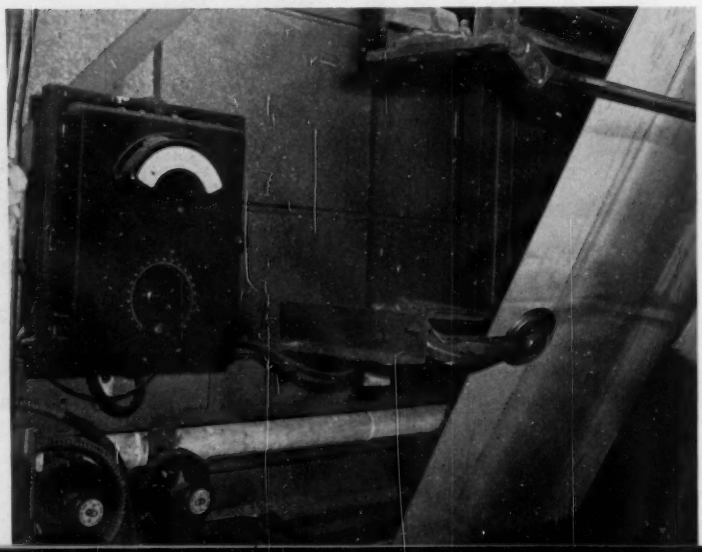
TURN SHARP EDGES of doctor blades inward during storage.

Check These Points on Continuous Pad Steam Dyeing

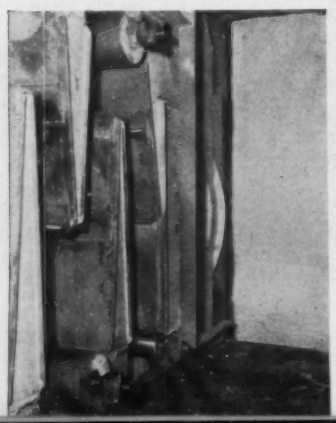


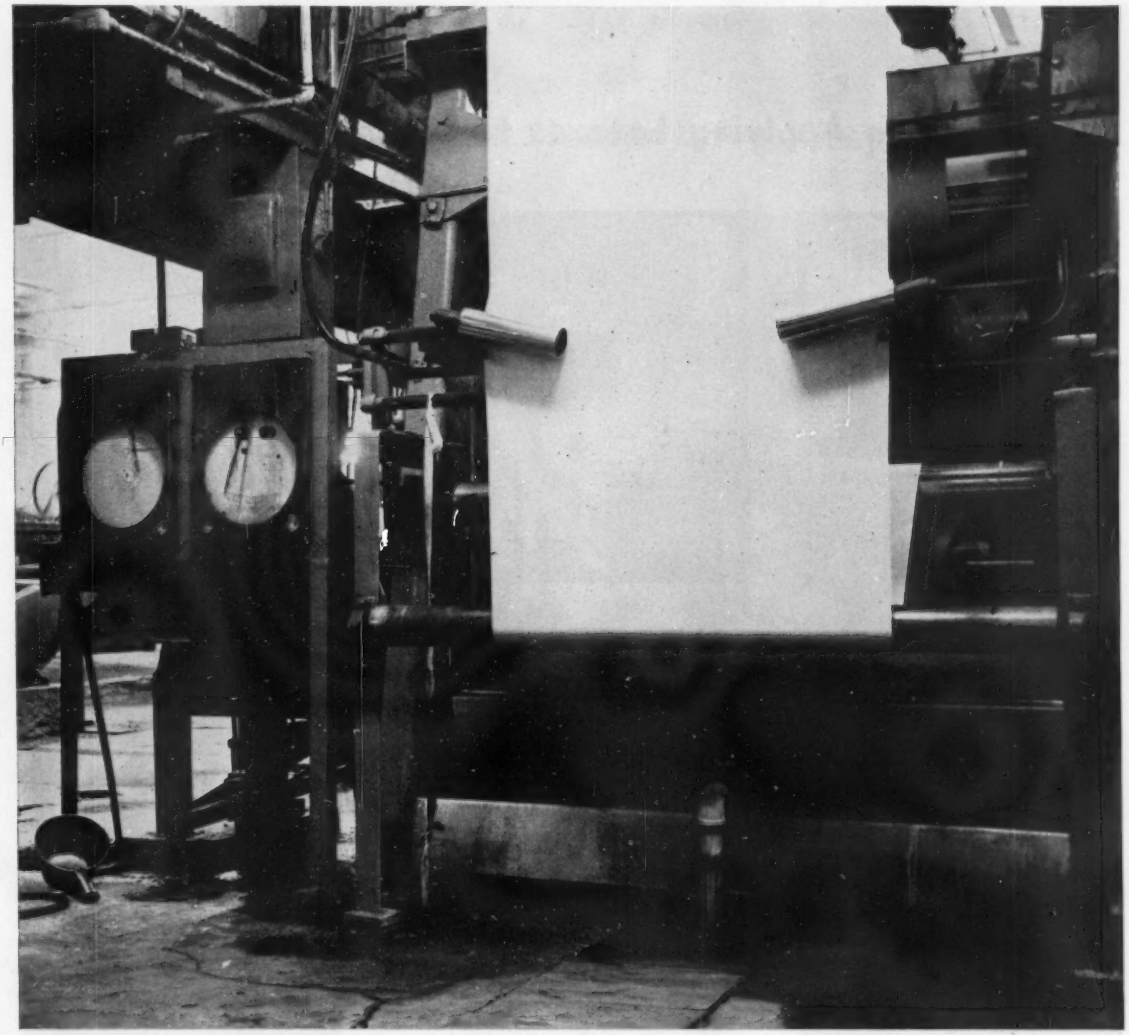
LEVEL CONTROL and a small pad box (arrow) on pigment pad improve shading.

FOR IMPROVED APPEARANCE, avoid over-drying.



TEFLON-COATED ROLLS and fiber glass filters in pigment dryer greatly reduce cleaning time.

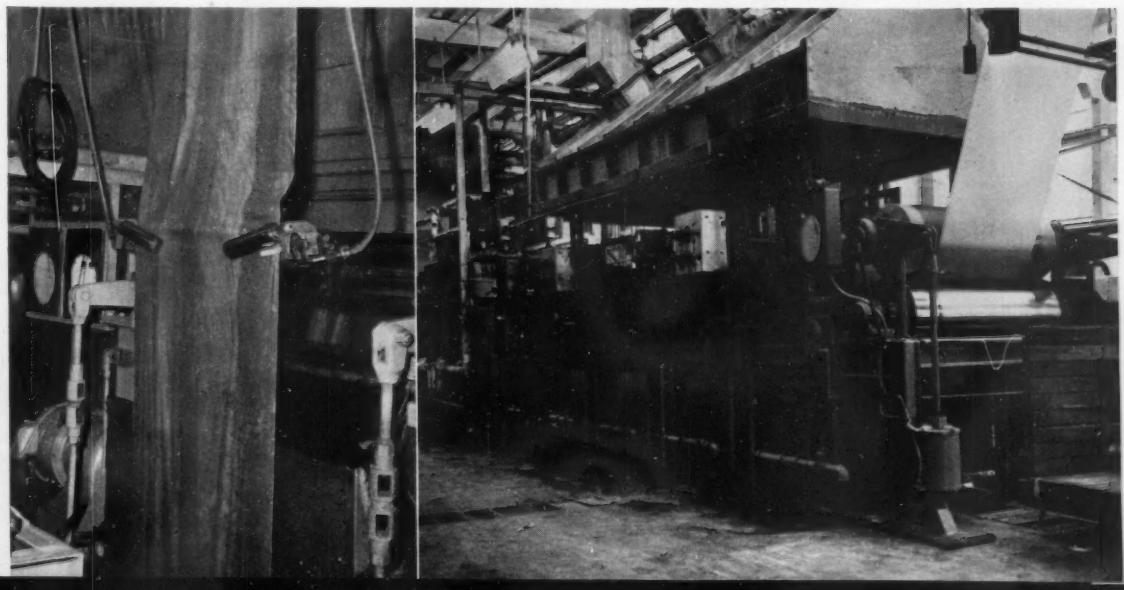




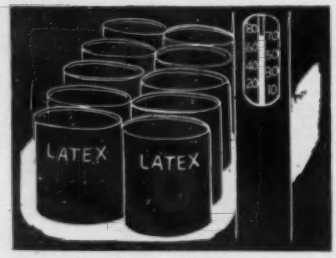
CONTROL LEVEL and temperature of chemical pad to reduce number of shades of a run.

CREASES in cloth must be prevented in all machines of range.

RAPID AND COMPLETE OXIDATION of vats, plus thorough soaping and rinsing, are of course essential.

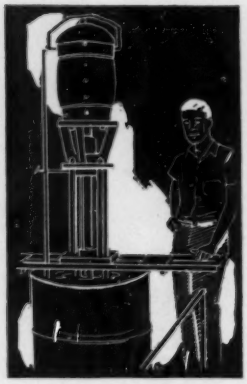


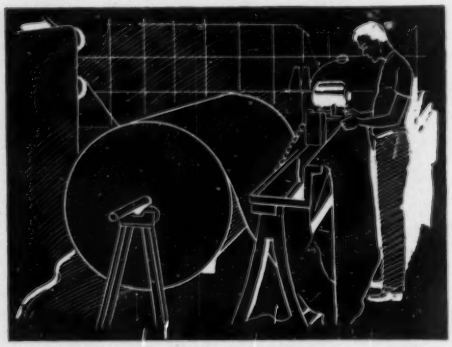
Hints on Applying Latexes to Decorative Fabrics



IDEAL STORAGE TEMPERATURE for latex is 70 F.

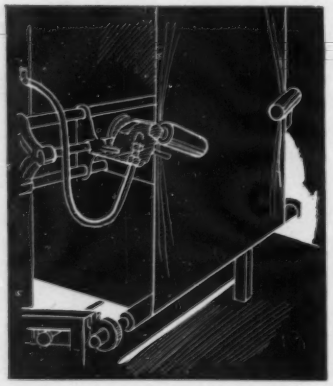
HIGH-SPEED AGITATION is necessary in preparing latexes. Use a variable-speed mixer. ➡





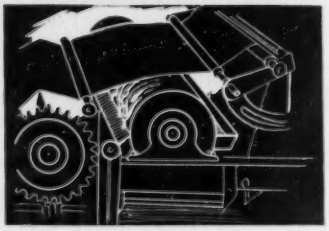
STRAIGHT SEAMS are a must, to prevent bowed cloth.

CHECK DOCTOR BLADE frequently to prevent pick-up of lint, which will cause streaking. ➡

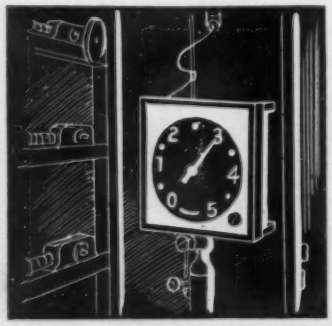


MISALIGNED FABRIC will result in creases; the part of the fabric inside the crease will not have latex applied to it.

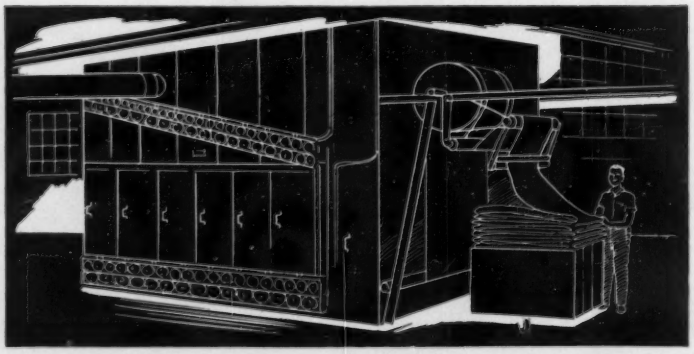
CONTROL COMPOUND VISCOSITY to prevent saturation or strike-through on fabric.



ADJUST APPLICATOR carefully, to prevent excessive deposit of latex. ➡



DRYING FACILITIES should be adequate, to permit complete vulcanization (280-325 F). Goods should come out of dryer bone dry.



TREATED GOODS should be handled in a relaxed state, especially right after coating, to prevent film distortion. To prevent wrinkling, the box should be wider than the goods.

Variable-Speed Dryer and Slasher Drives Easy to Maintain

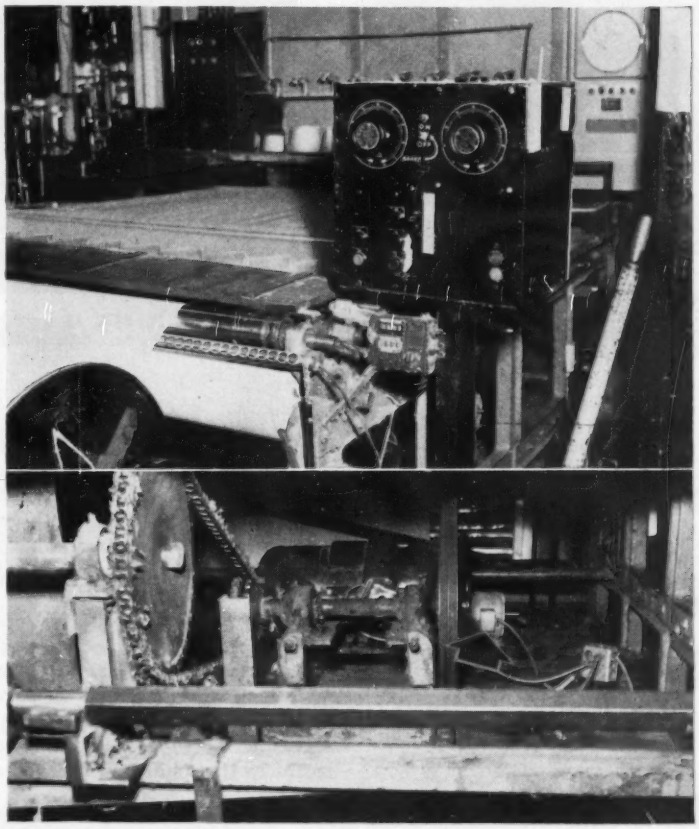
STAFF PREPARED

EXCLUSIVE

FIVE variable-speed eddy current clutch drives have been in use at Chatham Manufacturing Co., Elkin, N. C., since early 1953. This mill has two slasher drives equipped with two motors each; two dryer drives with one motor each; and one dryer drive with two motors.

Continual change in textiles called for more ends in warps, more tension, and more yards on warps. These demands soon outstripped the potential of the friction-type slasher drive formerly used at Chatham, according to management there.

The maximum number of ends slashed on rayon gabardine warps is 7200, and 3584 is maximum on cotton, with a minimum of 2160. The mill changed from 72" to 105" beams to meet market demands.



SLASHER CONTROL PANEL (top photo) and variable-speed eddy current clutch drives were designed and built at Chatham. This original unit and drive are still operating on a Gentle Air slasher running 105" beams with up to 7200 ends. Bottom photo: Eddy current brake (arrow) on original slasher prevents over-speeding of the delivery roll drive, a condition caused by tension on the beam wind-up.

Slasher Drive. As a matter of simple economics, this mill found it desirable to keep the delivery roll and beam wind mechanism, which precluded changeover to an expensive variable-speed drive in view of the existing value of the slasher.

Walter Burgiss, mechanical research engineer at Chatham, developed a suitable variable-speed drive which adequately meets speed and tension requirements of the beam wind-up. This drive maintains the desired tension and correct speed over a wide range.

Stall tension is maintained on the yarn during stop periods, and an adjustable creep speed is a function of the drive.

Stretch control is accomplished by inserting a PIV drive between the delivery roll and the size box.

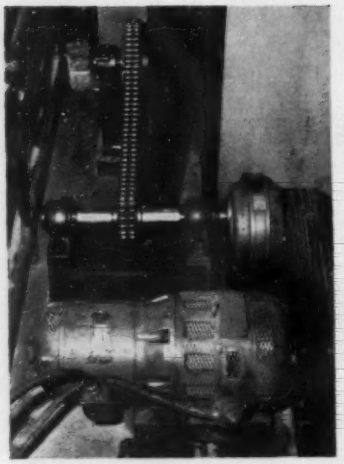
Description. The drive includes a standard constant speed a-c motor coupled to an output shaft through an eddy current clutch (magnetic) with a variable excitation control, both on the delivery roll drive and the beam wind-up motor.

The delivery roll motor also has a built-in governor generator that maintains any preset speed within load limits of the machine. The delivery roll motor is rated at three hp; beam windup is 20 hp.

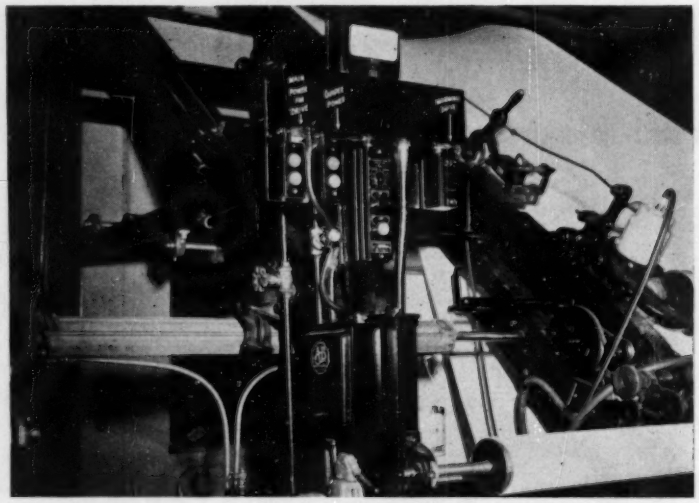
Servicing. One advantage of the drive is that it can be serviced by the average mill maintenance electrician, since there are only three electronic tubes for each motor, and the control circuits are built up of standard electronic parts which are available at any good radio parts supply house (with exception of one or two special parts which are available from Dynamatic Division of Eaton Corporation, Kenosha, Wis., who now manufacture this drive.

The first complete drive of this kind was installed on an Uxbridge Gentle Air slasher at Chatham and is still in operation. Beyond normal bearing changes, brush and tube replacements, these drives have given no trouble.

Routine inspection and cleaning is done as a part of over-all plant preventive maintenance program. All tubes are replaced once each



FLOOR-MOUNTED DRIVE of tenter-type dryer installation. Eddy current brake, to prevent over-run on stopping, is built into this drive motor.



CONTROL PANEL of variable-speed drive, designed and built by Chatham engineers and installed on Hunter tenter-type dryer.

year, regardless of condition.

No Overspeed on Slasher. Without some retardant, tension on the beam wind-up would cause the delivery roll drive to overspeed. This condition is prevented on the slasher by the installation of a very small eddy current brake of the rotating type (air cooled), mounted externally and belt driven from the delivery roll motor pulley.

Dryer Drive. The same components in 10- and 15-hp sizes are used to drive two Hunter tenter chain-type blanket dryers.

One unique feature in this application is a built-in eddy current brake on the drive motor, automatically operated by the stop button on the dryer. This brake prevents over-running when the dryer stops.

A governor generator is included to maintain constant preset speeds over a range of from 50 yards per minute to a speed slow enough to permit operators to straighten tenter chain pins without stopping the dryer.

On the governor generator circuit, an electrical tachometer is connected and calibrated to read in ypm.

Slave Drive. A slave drive or constant tension range drive with an adjustment to vary from tension to slack conditions between any two units of the ranges is also employed. Another unique application, this drive permits a speed relationship between two adjacent units to be maintained over a wide speed range.

The slave unit gets its controlling impulse from the main motor speed control circuit. The main motor is 10 hp, and the slave unit is 1½ hp. This slave unit drives a fabric coating unit adjacent to the main fabric dryer at Chatham.

Minimum maintenance requirements and simplicity are the most impressive features of the drives. The drives are operating through a 13-to-1 shaft-type gear reducer and driven from the motor to reducer with eight A-section V-belts. Drive from reducer output shaft to dryer proper is with 1¼" roller chain.

Acceptance of this drive by mill maintenance personnel has been impressive at Chatham. The current version of the drive is called Dynamatic Drive.

Price Fluctuations Seen As Key Problem In Effective Pension Planning

MANY of the pension plans in operation in the United States are unrealistic since they have been set up to operate over long periods of time disregarding the fundamental economic fact that prices rarely remain stable for long periods of time, according to Johnson & Higgins, actuaries and pension plan advisers.

Only a small portion of the money set aside by an employer under a pension plan today is used to provide pensions to present pensioners. Most of the money is paid into the plan to provide pensions payable many years in the future. For this reason the effectiveness with which an employer spends his pension dollar is measured, not by the purchasing power of today's pension at today's prices, but by the purchasing power of tomorrow's pension at tomorrow's prices.

Johnson & Higgins described in a recent issue of the Employee Benefit Plan Bulletin a method which provides greater assurance that the pension dollar will actual-

ıy provide the retirement security expected when it was paid into the plan.

This method consists of a balanced retirement program providing both a dollar annuity and an equity annuity. The equity annuity is simply an annuity system worked out in units instead of in dollars. The units represent a share in the market value of a trust fund invested in common stocks.

The equity annuity was described as a new development, recently perfected to give practical application in pension plans to these long familiar financial principles: (1) The investment approach which will produce long range purchasing power with the least risk is a program hedged, or balanced, between fixed dollar investments and common stocks; and, (2) Common stocks which have no claims against them except in terms of their market value are safer than common stocks with dollar claims against them.

Employers were advised to:

(1) Re-evaluate your pension plan from time to time to make certain that pension dollars are being spent as effectively as possible under current conditions;

(2) Don't be lulled into illusory satisfaction because a pension plan is adequate at today's price levels;

(3) Think ahead to the purchasing power which today's contributions will provide during the many years pensions are being received;

(4) Study the application of the equity annuity principle to your individual pension situation.

Pallet Pack Conserves Space and Speeds Handling

STAFF PREPARED
EXCLUSIVE

REDUCED packing costs and improved materials handling and warehousing are the advantages offered by a newly developed carpet yarn shipping unit.

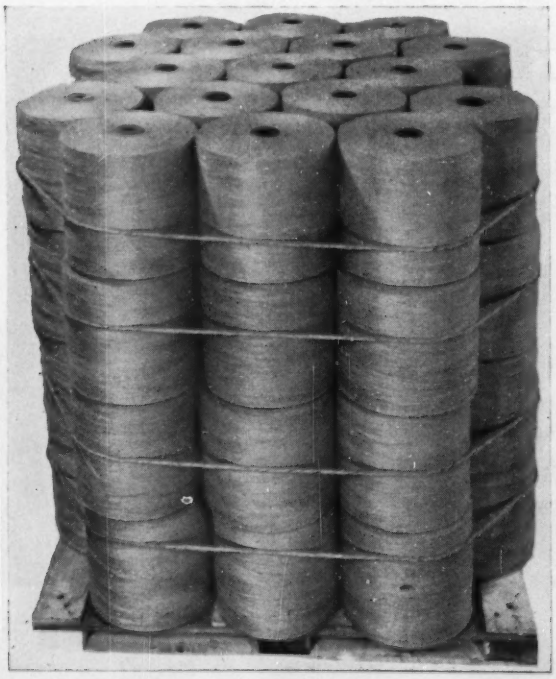
The package consists of tubes of carpet yarn stacked directly on a wooden pallet in either a four-layer unit of 68 tubes weighing a total of 1400 pounds, or of a five-layer unit of 85 tubes totaling 1800 pounds.

The shipping unit is called the "Pallet Pack," and was developed by Dolphin Jute Mills, Paterson, N. J.

The Old Way. Conventional shipping package used by the jute industry is a 16-tube unit made by placing the tubes in a pre-sewn burlap bag. This is closed at the top by hand-sewing a burlap top to the bale. This package weighs about 320 pounds.

When a carload shipment of 25,000 pounds is made, 78 of these bales are individually weighed, transported, and stacked in the carrier truck.

At the carpet mill, the truck is unloaded bale-by-bale and the bales are transported and stacked one-by-one. The method is gen-



←
"PALLET PACK," showing four-layer unit before being covered with burlap cap. Unit dimensions are 41 x 47 x 43.5 inches (five-layer units [not shown]: 41 x 47 x 54.5 inches). Each layer of the unit, containing 17 tubes of jute carpet yarn, is secured with rope.

→
PALLETS STACKED THREE HIGH. Each unit is covered with pre-sewn burlap cap. Each layer of the pack is wired for unit strength to prevent shifting in handling and shipment.

erally troublesome at this point because of the small surface area contact of the small bales. The customary method is to place four bales on a pallet, and to stack two or three pallets; this is generally a shaky and unsafe method. Another custom is to store the small bales on their sides in layers with timbers separating layers.

Transporting the small bales of jute yarn to the creeling area of the mill is usually cumbersome, and in opening the bales, accessibility to the jute tubes is limited to the top opening of the bale.

Advantages Of "Pallet Pack." Designed to overcome these difficulties, the new put-up makes possible the following efficiencies:

1. Packing time reduced by simplified put-up, packer output increased.

2. Loading time reduced by 65 per cent. The pallet can be loaded into an average 32-foot trailer by fork lift trucks with 16 four-layer units on the floor totaling 22-23,000 pounds, or 28-29,000 pounds with five-layer units. Savings in unloading time also follow.

3. Ease and safety of warehousing. "Pallet Packs" can be stacked three units high, permitting the storage of 5400 pounds of carpet yarns in a space 41 x 47 inches.

4. Yarn handling at carpet creel reduced. The warp creel can be supplied with the same poundage of yarn by handling 80 per cent fewer units than are required with the conventional 16-tube bale. The time involved in opening these creel supply units is reduced by 75-80 per cent. Once uncovered, the pallet of yarn is accessible to the creelers from all four sides.

Weaving Defects (Part 5*)

BY CLYDE O. CRONIC
EXCLUSIVE

Bad Cover or Face (Wavy or Slack Weave) Especially on Drill, Twill, and Sateen.

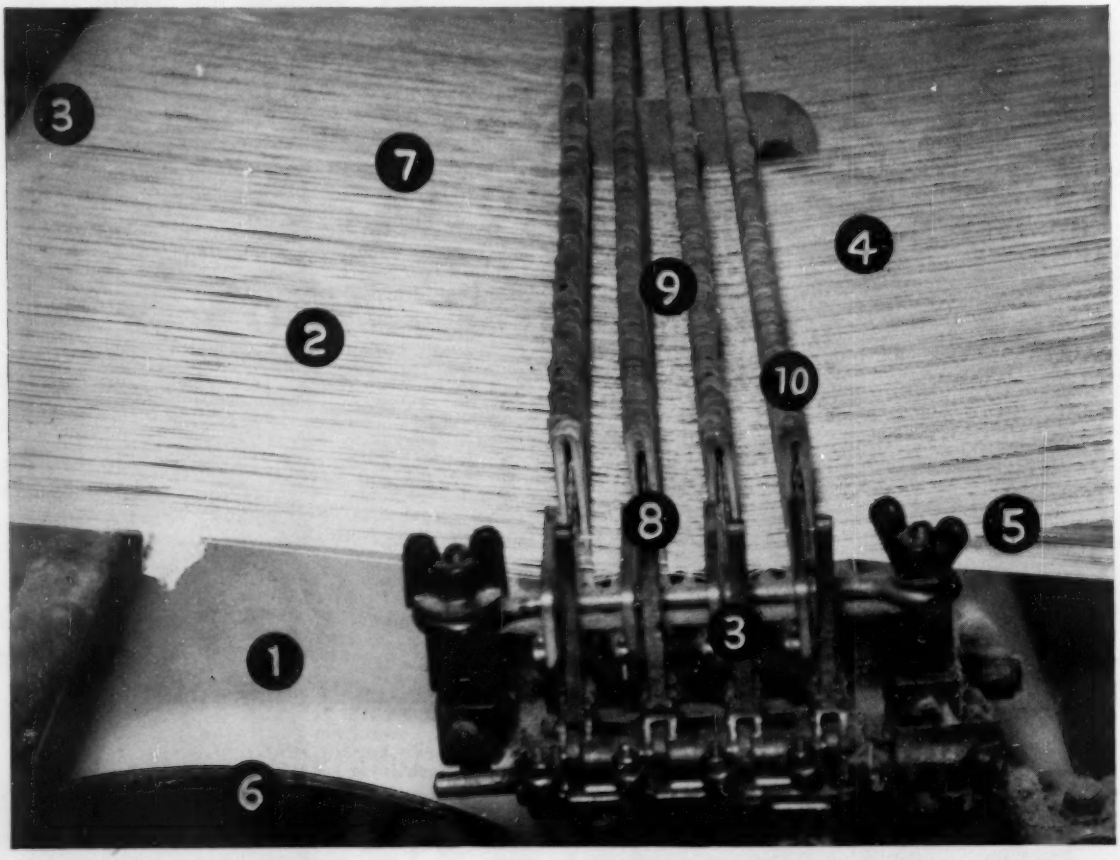
1. Softly wound loom beam (fault at slasher).

2. Improper dressing at slasher (wrong size formula, bad blankets).

11. Let-off on vibrator rod spring not properly regulated.

12. Ratchet let-off wheel slipping.

13. Whiproll cam out of time.
15. Harness improperly timed.
16. Take-up gears slipping.
18. Worn or wrong take-up roll covering.



Reedy Cloth

3. Stop motion girt and whip-roll too low; raise until top shed is slack and then check timing of harness.

4. Warp too tight.

19. Reed used is too coarse.

20. Low take-up roll.

Slack Selvage

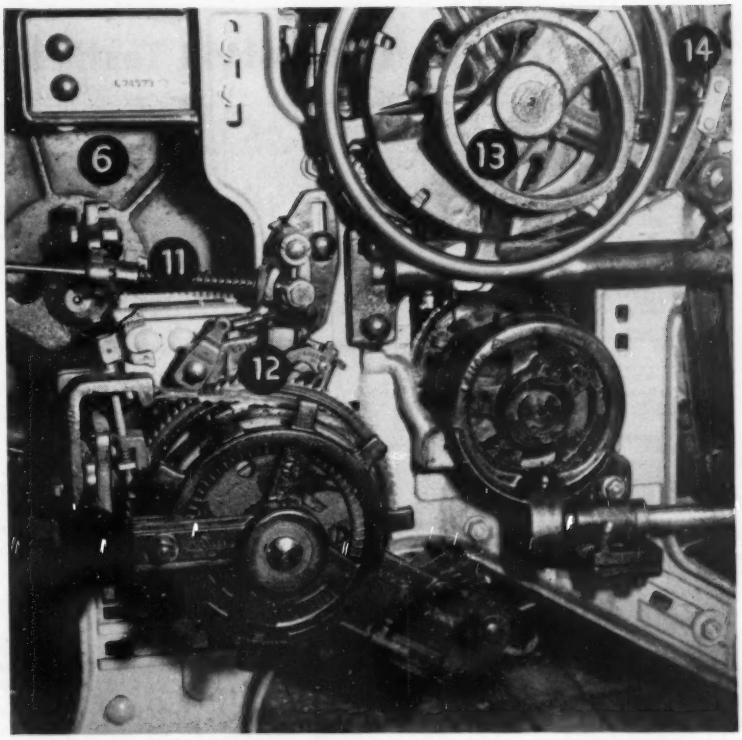
5. Selvage ends drawn in reed so they will not have the same contraction as body ends.

6. Crooked loom beam heads; build of warp is such that one side will be high and the other low, causing alternately tight and slack selvage as beam rotates.

17. Cloth rack not going up same distance on each side.

Not shown in photographs:

22. Too short a press roller at slasher.



Reed Marks

7. Warp too slack.

14. Crank arm loose.

15. Harness not timed properly.

21. Reed loose in reed cap.

Too Much Crimp (Take-Up) in Warp

3. Take-up roll and stop motion girt set too high.

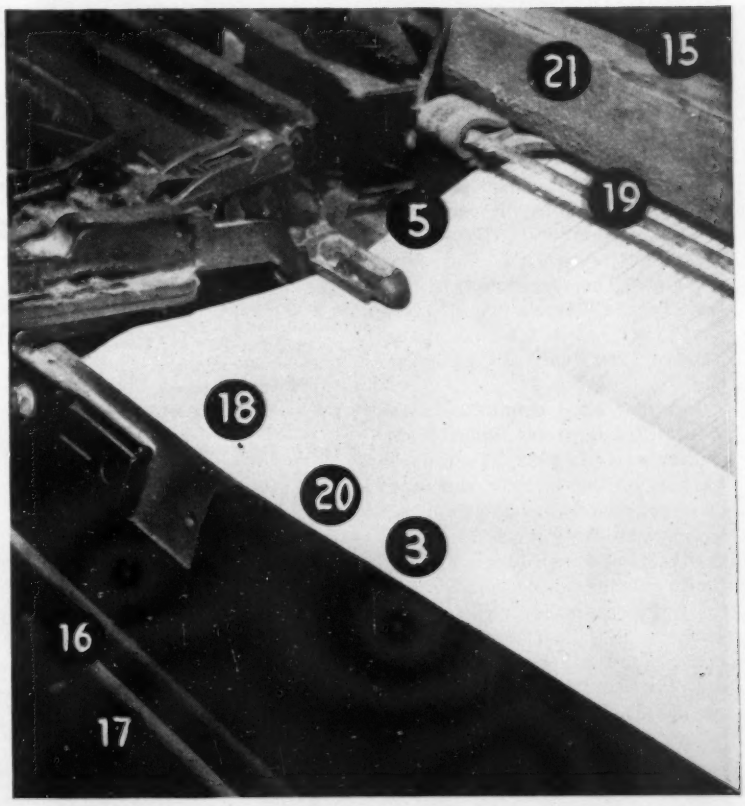
7. Slack warp.

15. Improperly timed harness.

Not shown in photographs:

23. Not enough tension in shuttle.

(Too little crimp in filling can be caused by insufficient tension in shuttle.)



Warp Threads Out

8. Warp stop motion out of fix.

9. Drop wires dirty; accumulation of lint may prevent their dropping. Dirty or corroded electro bars (on electric stop motions).

10. Bent or broken drop wires.

*Previous parts appeared in May, June, July, and August issues.

Ten Years of Cotton Textiles—1945 to 1955

	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955
EQUIPMENT											
COTTON SYSTEM SPINDLES											
Spindles in place at beginning of year	23,105,942*	23,787,000	23,928,000	23,727,000	23,751,000	23,342,000	23,113,000	23,178,000	23,131,000	22,940,000	22,564,000
Increase or decrease from preceding year	−236,980	+681,058	+141,000	−201,000	+24,000	−409,000	−229,000	+65,000	−47,000	−191,000	−376,000
New installation, additions and replacements	323,688	323,056	416,555	607,358	858,623	649,780	771,065	295,642	267,328	219,282	
OPERATION											
CONSUMING COTTON ONLY											
Average number of spindles active on last working day of month	N.A.	21,475,000	21,588,000	21,391,000	20,063,000	20,456,000	20,662,000	19,944,000	20,023,000	19,391,000	
CONSUMING FIBERS OTHER THAN COTTON, OR BLENDS											
Average number of spindles active on last working day of month	N.A.	1,172,000	1,198,000	1,337,000	1,174,000	1,295,000	1,261,000	1,337,000	1,323,000	1,327,000	
ALL COTTON-SYSTEM OPERATION											
Average number of spindles idle on last working day of month	N.A.	1,212,000	1,066,000	1,050,000	2,334,000	1,372,000	1,264,000	1,887,000	1,572,000	2,015,000	
Spindle hours run:											
On 100% cotton	107,354,187,000	109,474,292,000	116,040,000,000	115,846,000,000	97,874,000,000	117,753,000,000	118,163,000,000	109,986,000,000	118,545,000,000	108,849,000,000	
On other fibers, blends	N.A.	5,875,000,000	6,346,000,000	7,432,000,000	5,816,000,000	7,502,000,000	7,563,000,000	7,583,000,000	7,487,000,000	7,560,000,000	
Hours run per average active spindle	4,876	5,094	5,371	5,484	4,882	5,760	5,735	5,524	5,904	5,619	
MARKET											
COTTON TEXTILES											
Production in square yards	9,779,238,000	10,171,225,000	11,083,383,000	10,863,129,000	9,391,578,000	11,206,659,000	11,415,218,000	10,593,006,000	11,332,562,000	10,872,728,000	
Exports in square yards	673,601,000	774,945,000	1,480,025,000	938,796,000	880,255,000	558,678,000	802,427,000	761,595,000	621,005,000	605,047,000	
Imports in square yards	80,029,000	43,758,000	15,962,000	31,749,000	19,743,000	47,799,000	45,779,000	36,337,000	64,300,000	73,484,000	
Available for domestic consumption	9,185,666,000	9,440,038,000	9,619,320,000	9,956,082,000	8,531,066,000	10,695,780,000	10,658,570,000	9,867,748,000	10,775,857,000	10,341,165,000	
Population at July 1st	139,928,000	141,389,000	144,126,000	146,631,000	149,188,000	151,683,000	154,360,000	157,028,000	159,643,000	162,409,000	
Available for per capita consumption in square yards	65.65	66.77	66.74	67.90	57.18	70.51	69.05	62.84	67.50	63.67	

*Consuming cotton only. N. A.—not available.

MORE BALANCED conditions in the textile industry and continuation of the trend toward improved production, freer forward buying, and better prices now present in the market are endangered by growing imports of Japanese cloth, fabricated items and apparel, and by the perversion of our protective tariffs for the benefit of Japan, W. Ray Bell, president, The Association of Cotton Textile Merchants of New York, declared in the 24th annual issue of "Ten Years of Cotton Textiles."

Mr. Bell cited countable cotton cloth imports from Japan of 1.5 million yards in 1952, 32 million in 1953, 48 million in 1954, and based on experience so far in 1955 totals which will easily reach 70 million yards. In addition Japan has virtually submerged low-end markets for American mills in pillowcases, kitchen and dish towels, table napery and other goods, and is shipping heavy quantities of made-up shirts, blouses, and other garments which multiply its wide cost advantages based on exceedingly low wage scales. Japanese goods, he stated, readily undersell American goods at existing tariff rates. Yet, he charged, the national interests of this country were be-

**Following is a simplified tabulation of the tariff reductions prepared and published by the Cotton Department of the National Bank of Commerce, Memphis, Tenn.

	Jan. 1, 1955 Tariff	1955 Geneva Agreement
1. Unbleached cotton cloth—valued not over 70c, average yarn number not over 80	10% plus .35%	7½% plus .25%
2. Cotton cloth—bleached—Av. Yarn No. not over 30 and value per pound not over 80c	13% plus .35%	10% plus .25%
3. Cotton cloth—bleached—Yarn Nos. 30 to 50 and value not over 80c	18½% plus .5%	10% plus .25%
4. Cotton cloth printed, dyed or colored—Av. Yarn No. not over 30. Value not over 90c	16% plus .35%	12% plus .25%
5. Cotton cloth—printed, dyed or colored—Av. Yarn No. 30 to 50. Value not over 90c	22½% plus .5%	12% plus .25%
6. Cotton pile fabrics	31¼%	25%
7. Cotton table damask, value under 75c	20%	17½%
8. Cotton Blankets or Blanket Cloth	30%	22½%
9. Cotton Towels—not pile fabric—under 10c value Cotton Towels—not pile fabric—value 10c or more	40% 22½c lb. 20-35%	20% 20%
10. Table and Bureau Covers, etc.—not block printed by hand and N. S. P. F.	30%	15%
11. Cotton sheets and pillow cases	20%	12½%
12. Underwear—knit. Value not over $1.75 per lb.	45%	30%
13. Outerwear and articles not embroidered N. S. P. F.	35%	25%
14. Cotton "hit and miss" rag rugs without fringe	75%	45%
15. Cotton chenille rugs	40%	20%
16. Terry woven towels—valued under 45c each	40%	20%

In example No. 1, 10% plus .35% means 10% plus .35% for the average yarn number and this was cut to 7½% plus .25% for the average yarn number. The same principle applies through example 5. The values indicated are in cents per pound, and the percentages are applied by the customs collectors to the foreign wholesale value or export value, whichever is higher.

These sixteen examples explain a portion of this detailed agreement. Tariff reductions affect counts up to 90s yarns. The United States cotton used in the constructions covered by the Geneva Agreement would range from about one inch to 1¼ inch staple length.

trayed by the Geneva reductions of 25 to 50 per cent in cotton textile tariffs** recently approved by the President and due to take effect September 11.

Countering claims that 73 million yards of 1954 cotton goods imports from all sources were insignificant in the light of a 1954 domestic production of 10,872,728,000 square yards, Mr. Bell declared, "a quarter of a million yards of goods a week, injected into the stream of American textile commerce at prices under our own and often under our costs of production, are ample to starve our industry of profit and our workers of the fruits of profitable operation. No one can say how much Japanese imports contributed to profitless operations of mills here in 1954. No one can easily show the braking influence today being exerted by Japanese goods on the recovery due this industry. It is like stream pollution. It is like a little bit of poison in the well. And every month a little more is added."

The review recognized Japan as an important ally of the free world and textiles as its greatest industry, but declared that solutions of the Japanese problem "which tend to paralyze our own industrial potential and defense in the guise of aiding another nation are inconsistent with our national welfare." It cited quotas on Japanese imports, "the means used by virtually every other nation," as the only effective method of meeting the problem, holding that it was basic that Japan's industry be sustained by betterment of general conditions in its natural Far Eastern markets.

Mr. Bell cited 1954 as one of the most difficult years profitwise through which the textile industry has passed since the war, although production-wise output was only about 4 per cent below the previous year. So far in 1955 production has recovered by about 3¼ per cent, cotton consumption is up 6 per cent, and spindle hour activity up 8 per cent, although wholesale prices have risen only about 3 per cent in broad woven goods and on house furnishings only fractionally. Cotton goods values run 10 per cent below 1947-49 averages where the all-commodity index, excluding farm products and foods, is 15 per cent above.

He cited ready absorption in the past year of cloth production without stock accumulation, and rising confidence which has led buyers to make extensive forward commitments so far this year. Rising costs of production and higher minimum wage proposals, which will affect some textile operatives and the garment trades still more extensively, were cited among supporting influences, while the report noted that cotton plantings reported by the Government for 1955 are the lowest since the 1880s.

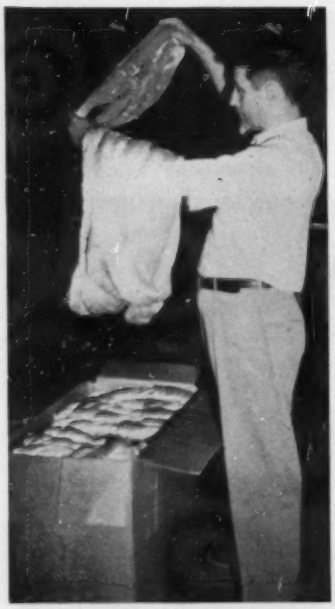
Sew Cloth Bale Covering with Slasher Waste

STAFF PREPARED EXCLUSIVE

HARD waste from the slasher has a practical use in the mill. The sized waste can be rolled into a ball at the slasher and passed along to the cloth baler. He cuts it into lengths suitable for sewing the burlap covering on bales of cloth. This not only effects a useful disposition of the waste, but eliminates the purchase of outside twine for this purpose.

SLASHER WASTE HANGS handily within baler's reach.

1. FIRST STEP in second-prevention system is inspection of dyed skeins for color match and evenness. Al Sidler, general manager, (left) and Marvin Simkins are making this visual check; they will be called on in final stages of the method to decide on borderline cases.



2. SAMPLE SKEIN is taken from a hank. Ten to fifteen such skeins are pulled from 100-pound lot.

3. FILLING YARN is wound from each skein to a bobbin.

Silk Weaving

This Method of Sampling

STAFF PREPARED
EXCLUSIVE

Blue Bird's raw material cost is high. Loss on uneven shade can be enormous. Here's the way Blue Bird samples to evaluate filling shade before a production run.

BLUE BIRD Silk Mfg. Co., Inc., York and Columbia, Pa., specializes in weaving better grade neckwear, linings, and dress fabrics. Principal fiber in use by the company is silk, with cuprammonium and viscose rayon occupying second and third place, respectively.

Considering silk material cost alone, in the dyed and thrown state, a typical construction represents an investment of about $235 per hundred woven yards. This does not include the labor costs of winding, warping, quilling, weaving, inspecting, picking, etc.

It may be readily appreciated in using dyed lots for such weaving, where unevenness of shade is a "nature-of-the-beast" difficulty in pure dye bright work and a far greater hazard in souple dyeing, where retained sericin tends to uneven distribution on the yarn, it is imperative that risk be minimized.

The possibility of apparently uniform yarns yielding streaky and/or shaded effects in the cloth is ever present, and a method, constituting more of an approach than a cut and dry procedure, has been used primarily on solid colored dress goods. Large variations in yarn sizes, fabric textures, and weaves make a simple solution impossible.

The Usual Way. Most mills use some kind of inspection system for filling yarns to guard against shaded cloth when weaving silk. Generally this takes the form of close visual inspection. Before doing anything else, Blue Bird also follows this system. A 20-skein sample of each lot of 20/22 tram coming from the dyehouse is carefully examined for both match and shadiness or streakiness. In the case of dress goods yarns, or any other difficult yarn, lots which pass this examination are checked for match by the general manager or the plant superintendent.

Another often-used method, and one which was formerly used at Blue Bird, is the "mirror" test.

4. SAMPLE QUILLS are made up next.

Will Prevent Filling Bars

Filling lots were sample-wound, made up on small seriplane panels, and the panel range examined for shading by holding two of the boards side by side with their outer edges elevated.

Spot checking of skeins, quills, and weaving cloth has not been discarded at the mill; it is still done as a matter of good practice.

In addition to this standard checking, the use of multiple shuttle boxes to "average out" random quills of shaded yarn is practiced at Blue Bird. This sometimes takes the form of pick-and-pick-and-pick, three-shuttle weaving where solid colors are called for, but again represents no general rule.

Blue Bird's Approach. The following deals with filling yarns, which constitute by far the greater problem.

The method developed at Blue Bird for evaluating these sensitive and expensive yarns before unmerchantable cloth is woven, involves getting the filling into the fabric on a small scale under the same, or as close to the same conditions as would be present in production. The usual pattern followed includes sampling, yarn preparation, weaving, evaluating, and deciding what to do if there is a problem.

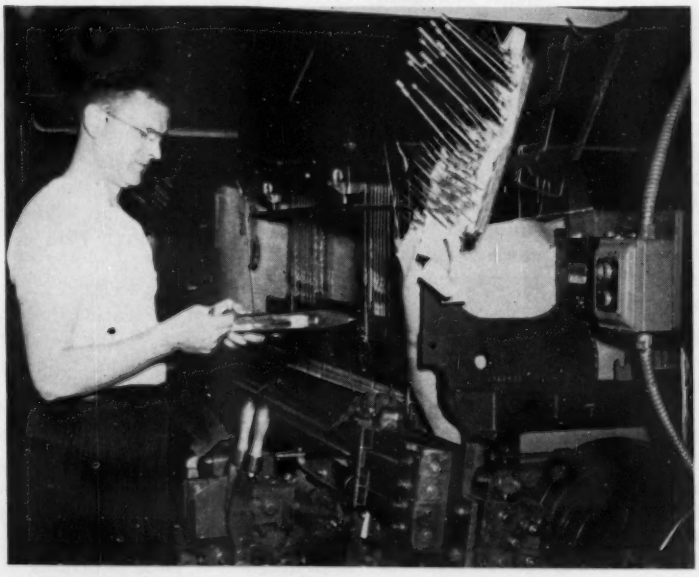
Sampling. Generally, one or two skeins of dyed yarn are pulled from each of 10 to 15 hanks selected at random from the dye lot. These lots usually run about 100 pounds.

Yarn Preparation. These skeins are then wound so that each fills a bobbin. One quill is made up from each bobbin and the sampling is prepared on a quill board in the winding department.

Weaving. The quill sampling is then placed on a loom containing a warp color, yarn description, and pattern as close to the eventual weaving use of the yarn as can be found. This is done on regular production looms.

A number of bands are then woven, the number depending on the extent of the sampling. A common sample contains five bands, each about four inches long, woven pick-and-pick-and-pick and separated by strings woven in the selvage. In this instance the sampling woven reflects yarn from 15 random skeins, or roughly two per cent of the dye lot.

5. WEAVER runs sample quills shown on loom. Samples are woven in short bands, separated by strings in selvages.



Evaluation. While all this is going on, the dyed lot is held in the winding department, and is not touched until the evaluation is complete.

One of three decisions is made:

1. The weaving foreman examines the woven sample and if it's OK he releases the filling lot for winding and further processing, or

2. The weaving foreman examines the woven sample and rejects it. In the case of pure dyed bright silk or other yarns the lot is returned to the dye house for redyeing. Where the lot is souple, such corrections are not practicable. Souple lots are generally degummed and dyed for some other quality or color.

3. The weaving foreman examines the woven sample and finds a borderline case where he can't definitely OK or reject the lot. He then applies to the superintendent for help.

Deciding On The Tough Ones. In borderline cases all the test results possible will not substitute for experience. Sometimes the foreman can be given a direct answer on whether the lot is OK or not.

If this is not possible, the order may be given to prepare yarn for, and weave up, four yards. If OK or reject can be determined at this point, it is. If not, instructions may be issued to weave a half piece, after which a decision is usually possible. If need be, the general manager is consulted.

In deciding what to do in these difficult cases, judgment must be based on knowledge of the end product: a warp satin, for example, permits more lenient evaluation because very little of the filling shows on the face of the goods.

A taffeta requires strict attention to the effect of filling unevenness; and important but less critical, the twills and baratheas follow.

Through the adoption of the above approach, Blue Bird has been able drastically to reduce the production of woven cloth degraded by reason of uneven dye effects.

The Consumer Is Your Customer

BY JULES LABARTHE*
Mellon Institute

EXCLUSIVE

Who is to guide the maker of the textile garment or product if he does not have information as to the suitability of the textile, the color, and the finish for the end-use product he is making?

Is It Washable? The merits and demerits of the wash and wear summer suit provide for much discussion, not only at the retail level but on the part of suit manufacturers and, even more important, on the part of the partisan consumers. The only consensus seems to be that, regardless of any criticism of the garment from the standpoint of appearance after washing without pressing, the minimum requirement is that all textile elements entering into the garment must be washable without change in dimension either through stretching or shrinking or warping.

The truly significant fact in this controversy about a garment type that traditionally has been refreshed by dry-cleaning processes and not by washing is that it differs only in degree from any other washable garment. All common articles of wearing apparel are assemblies made up of more than one textile element. The simplest would be a garment composed of two textile materials; namely, the fabric of which the garment is made and the sewing thread. Any attempt at adornment, most reinforcing, any filler or padding, or any stiffening supplied by an extra layer of cloth—in fact, any other fabric element—means additional textile products.

The great problem to a consumer has been that often in her experience she has made a purchase of a dress, a child's suit, a sport shirt for her husband, or indeed almost any other textile product, and has found to her sorrow that all the fabrics or textile elements entering into its construction were not equally washable; and, in certain cases, not equally cleanable by dry-cleaning methods.

If the housewife's textile problems were confined to trimmings and other supplementary textile elements, the problem of satisfactory end-use applications would be complex enough. But, in many cases, it is the principal textile component, the fabric of which the garment is made or the fabric used in the tablecloth, the drapery, the towel, even in the bedding, that has failed to give satisfactory service.

Retailers and their customers—the consumers of America—are prone to over-simplify an individual complaint by saying, "Well, that is the way rayon behaves," or "That is the characteristic kind of failure for Dacron and wool blends," or any one of a number of generalities.

Snap judgments are obviously unfair to individual fibers and to blends of fibers. It is true that each textile fabric has its strong points and its weak ones, but in the final analysis the only level in the production where the real facts of the textile product's durability in service can be known is by the dyer or the finisher, whoever has the product last.

Having dyed the fabric, the dyer should know something of the potential durability of the color for sunlight, washing, wet or dry cleaning, perspiration, crocking, and other kinds of service exposure. Similarly, the finisher should know something of the degree of permanence of any special finish or group of finishes he might have put on the fabric; whether these had to do with water repellency, crease retention, permanent pleating, glazing, insect repellency, or any other special feature desired by his customers. It is therefore unfortunate that this knowledge of the potential performance of these goods in the hands of the ultimate consumer is often lost at this point.

It would seem to be little more than chance that guides any particular piece of fabric into its final end-use item for the consumer. Admittedly, a novel weave might be more appropriate for one end-use item than for others; similarly, the color or perhaps the printed design might serve to guide the fabric into a specific end-use application rather than into some others. The presence of a special finish might eliminate some applications from consideration. Nevertheless, we find almost an infinite variety of textures, weaves, compositions, colors, and special finishes in such things as women's dresses.

The same materials and more would be found in women's suits. Some of these same fabrics could go into children's clothing or into men's shirts and slacks. Modern decor in interior decorating calls for a wider variety of textures and colors than ever before; perhaps these same fabrics would therefore be guided into use in draperies or in slip covers. My point is that the dye or the finish or both may be totally inappropriate for any but a few or perhaps only one of these end-use applications.

Who is to guide the maker of the garment or the drapery if he does not have information as to the suitability of the textile, the color, and the finish for the end-use product he is making? Who else but the dyer and finisher can supply this information to him? If the manufacturer of the textile product is confused, what of the retailer and what of the retailer's customer—the ultimate consumer?

Can Standards Help? A few critics have stated that retailers and consumers are leagued against the manufacturing industry in pressing for standards for textile products under such programs as

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the work of Sectional Committee L-22 (Rayon and Acetate Standards), Sectional Committee L-24 (Institutional Fabrics Standards), and Sectional Committee L-25 (Standards for All Fabrics) in the American Standards Association. Such is not the case.

These standards are not intended to serve as a means for consumer and store to pass back large quantities of merchandise to the garment manufacturer and eventually to his textile supplier. The purpose is to afford a somewhat limited number of textiles in colors and finishes which the textile industry can guarantee for a known end-use application. It might be the same fabric or even the same color in goods intended for frequent exposure to the sun and those which will be infrequently exposed. The difference then would be with the finish.

It might, on the other hand, be the same fabric and the same finish but with a different dyestuff; one which would stand prolonged exposure to sunlight and to rigorous washing conditions; the other dyestuff with less colorfastness to those destroying agencies. Thus the first article might be suitable for children's outerwear, the other for children's pajamas.

Common Consumer Complaints. The importance of consumer complaints in this whole picture is somewhat difficult to define simply because by and large complaints are so infrequent. They are infrequent in the sense that an individual store may have sold dozens and perhaps hundreds of identical items about which only one or two consumers have complained. The laboratory investigation of these complaints might disclose, however, that this assembled garment was made of an inappropriate fabric for that end-use application. For example, it might have sun faded, whereas the customer had a right to expect that in such things as a spectator dress good sun resistance should have been guaranteed.

On the other hand, the garment might have failed through the use of an inappropriate and inferior kind of trimming. This is not at all uncommon in children's wear where braids and other trimmings very often bleed all over the garment when it is washed, and certainly no article of clothing for children should be nonwashable.

Possibly the finish is at fault. We occasionally run into crease-resistant finishes in cottons and rayons that develop foul odors in hot, humid weather when the finish breaks down in service. Chlorine retentive finishes are still appearing in some crease-resistant treated cottons, and, of course, we have a great variety of coats that through some mistaken notion are promoted as rainwear but which have virtually no water repellency.

No textile standards, no amount of testing of fabrics even in each point of development from fiber to fabric on the bolt are going to prevent consumer complaints. There will always be crotchety consumers who will find something about which to complain. There will always be errors in manufacturing practice on the part of the garment manufacturer which will lead to both justified and unjustified consumer complaints. There will always be relatively untried textures, colors, and finishes which, in service, may not live up to their laboratory test results, and there are simply not enough laboratory facilities to test every lot of goods.

Furthermore, there is not time to determine the functionability of some new materials, particularly those going into high-style items. They must hit the market fast before there is any possibility of copying the design of an exclusive fabric, matching a new color, or copying the lines of the new glamor garment.

Our point is that there are far too many justified consumer complaints in merchandise that should be either staple or relatively staple in character. For these, there is little excuse because the same basic fabric constructions are used year after year. This means that dyeing and finishing errors lead to most of the consumer complaints, although there are numerous cases where the garment manufacturer has skimped or in some other ways made the garment vulnerable to damage such as by the use of inferior findings and trimmings.

It is not my contention that a store should never close its eyes to the occasional complaint about a high-fashion item such as an evening dress, because, if this material fails to give satisfactory service, the kind of service to which the consumer is entitled, then it stands to reason that every garment made from this same piece of goods has probably disappointed a consumer some place else. Such information should be of value to the textile producer so that a mistake in processing or coloring or fabric construction may be corrected before the same season comes around again the next year.

In short, we regard each consumer complaint as being as much to the eventual interest of the fabric producer as it is to the consumer herself. Of course, the store can take care of a complaint of an individual consumer and make a happy customer of her once more. This is only part of the responsibility the store owes, not only to that customer but also to all its customers and to its resources.

If the complaint is a justified one, warranting an adjustment, then it is only reasonable to suppose that this information should be passed back to the garment manufacturer or to the maker of the upholstery fabric or the drapery material or whatever else it may be. Somewhere along the line there is a point where this piece of gray goods was damaged or rendered unfit for the end-use application for which it was eventually sold. If an error in judgment was made, then that error should not be repeated; if, however, it was a chemical or a mechanical degradation of the fabric, then this particular step should be avoided in future goods.

The Textile Producer Is Vulnerable to Errors of Others. Most vulnerable to consumer criticism of textiles is the store where the purchase is made, and then, if the fiber is known and particularly if that fiber is exclusive with one producer, that producer, too, is a suspect as far as the consumer is concerned. To a lesser degree, the manufacturer of the garment (if his brand name is well known) may

also be subjected to criticism in the mind of the consumer. However, it may be that she has previously been well pleased with that manufacturer's product, and she will ascribe this failure not to something he may have done but to the failure of the fabric; and again the vulnerability of the textile producer and processor is highlighted.

Suppose you were to come out not with the ordinary new miracle fiber but with a "super" miracle. This latter would be processed into a fabric; it would be dyed and finished; possibly with the intention that it go into women's afternoon or semi-formal dresses. However, the texture and the color might appeal to the manufacturer of men's sport shirts, and he would seize upon this new material and, with the blessing of the super miracle fiber name, the promotion through stores would become active.

But, alas, the dye which was intended for 10 or 20 Fade-Ometer hours' service would be found to be totally inadequate for the sun exposure in sport shirts. Also, the color and finish which were intended for a garment ordinarily dry cleaned must now be washed in order to remove soil and perspiration. The results would be terrible. Super miracle fiber would receive a black eye wherever it was sold.

There is no good for you as the fiber producer to proclaim that the material went into the wrong end-use application. The facts would be that this new fiber was a disappointment; it faded in sunlight; it was not washable.

If the garment manufacturer and you as the producer of super miracle and the store as the promoter for the benefit of the consuming public had followed some kind of standards of quality in the appraisal of this material for that end-use, the mistake would have been avoided.

Two Current Problems. Currently one of the most perplexing kind of consumer complaints we have in our laboratory for the Kaufmann store deals with women's dresses with Dolman sleeves. They are in high-style. Many manufacturers' fabrics are getting a black eye as far as the consumer is concerned with the charge that the seams in the sleeve do not hold up in service.

The fact of the matter is that it is the fault of the dress manufacturer and of no one else. These sleeves are somewhat bulky. The result is that the seamstress or trimmer removes the surplus material along the bottom of the sleeve seam, trims it so close that at times the stitching itself has been severed; but, in any case, there is so little material left that even a moderate pull serves to open up these seams.

Recently we looked at a shipment of 50 dresses as they were unpacked in the store and at least half of them had openings in the sleeve seam from this close trimming even before they were taken out of the box. Is it fair to charge the fabric with failure to stand up in service under manufacturing conditions like this? Imagine trying to fit a Dolman sleeve dress in the ordinary high-rise armhole at the top of a coat sleeve without straining and pulling of the material of the dress!

Another kind of garment that has brought us more than the usual single consumer complaint about one product is the permanently pleated ballerina style cotton and Orlon skirt. The pleats did not remain permanent when the garment was washed; that is to say, they did not stay permanently all the way around. They were still present wherever the pleating was at right angles to the Orlon filling threads. They came out wherever the garment was cut on the bias and the pleating was not directly across the filling.

We contacted two of the mills producing this type of fabric. In both cases, we were told that the manufacturer had been advised that these pleats were permanent only in straight-cut skirts pleated across the filling. The result, of course, is that countless customers throughout the country are probably very critical of the claims made for the permanence of pleats in Orlon and cotton blends. The manufacturer of the skirt is soon forgotten, but the name of the store and the fiber producer will be remembered because of the failure of this merchandise and particularly of Orlon acrylic fiber.

By what stretch of the imagination can any textile finisher think that a finish permanently spotted by water will ever give consumer satisfaction? Yet in cottons, in rayons, in silks, and even in some wools, we have had fine fabrics permanently damaged by a few drops of rain, by a spilled beverage, or by perspiration. Nobody knows the name of the finisher; everyone knows one or more of the other names entering into this garment. The guilty party—unless the consumer complaint is followed through—can continue blithely to put out defective merchandise.

It is impractical, if not impossible, for any store even with laboratory facilities to have all consumer complaints about serviceability of goods studied by laboratory technologists. For one thing, stores vary in their adjustment procedures and in their basic policies. Some stores take full responsibility immediately and say the customer is right. Perhaps this is good public relations with customers; however, it encourages the chronic gripers and the tendency then is to forget the matter as soon as the customer has been appeased. Nothing more is done then with the merchandise, and the manufacturer is in the dark—perhaps concerning some vital quality feature of the merchandise.

Sometimes all consumer complaints are handled through an adjustment bureau. In other cases, it is preferred that the complaint be settled on the selling floor so that the consumer is then encouraged to make another selection.

Regardless of the method of operation, it stands to reason that those types of consumer complaints that are most prevalent and with which the store personnel are the most familiar will be those generally settled without recourse to the laboratory. This kind of procedure, though streamlined, deprives the laboratory of the opportunity of determining the frequency of some of these complaints and accounts in no small measure to the fact that, in our own experience on the Kaufmann Fellowship, few of our complaints are duplicates. That is to say, regardless of the number of individual

BREAKDOWN OF CUSTOMER COMPLAINTS ON WOMEN'S BLOUSES

	Cotton	Wool	Linen	Rayon	Ace-tate	Silk	Nylon	Miscel-laneous	Total
Generally Customer At Fault (1-13 Inc. and 23)									
1. Perspiration or antiperspirant (holes)	80		20	13	14	7		36	170
2. Perspiration or antiperspirant (color change)	1			5	5	3		5	19
3. Perspiration (dye bleeding)				2				1	3
4. Washing or dry cleaning (dimensional change)	14	7	1	19	29	5	1	11	87
5. Washing (color damage)	10			14	15	10	4	7	60
6. Washing (holes, rips)	3	4		28	44		1	3	83
7. Ironing (scorching, glazing, melting)	2		1	3	311	4	2	5	328
8. Staining and spotting (wearing or bleaching)	7	2		12	20	10		9	60
9. Corrosive chemicals (holes, including bleach damage)	26		2	2	9	2	1	1	43
10. Wear strain (holes, rips, cuts)	21	2	1	22	40	12	4	16	118
11. Wear abrasion (worn areas)	5	1	1	8	15	3	5	7	45
12. Heat or burning (damage except from hot iron)	1			1	4	1	1		8
13. Insects (moth and carpet beetle holes, etc.)		4							4
Generally Merchandise At Fault (14-22 Incl.)									
14. Seam failure	1			2	3				6
15. Sun rotting of fabric									
16. Sun fading of dye	1			2	1	8		5	17
17. Gas or atmospheric fading				1	24			6	31
18. Garment construction (seams skimped, poor fit, flaws)	4	2	1	15	18	4	3	11	58
19. Shifting of yarns	3			17	60	17	2	2	101
20. Improper processing (odor, print holes, etc.)	7			16	20	1	5		49
21. Faulty sales information (labels and claims wrong)	1				27				28
22. Crocking or rub-off of dye (dry or wet)	11	2	1	10	12	9		11	56
23. Miscellaneous (dermatitis, mildew, etc.)	7	2	1	19	19	3	1	12	64
Total	205	26	29	211	690	99	30	148	1438
Customer	163	19	27	130	519	69	19	110	1056
%	79.5	73	93	61.6	75.3	69.7	63.3	74.4	73.5
Merchandise	42	7	2	81	171	30	11	38	382
%	21.5	27	7.0	38.4	24.7	30.3	26.7	25.6	26.5

complaints about a shipment of garments, we probably have seen but one of these in the laboratory or in our store examination procedures.

When a verdict has been given by the laboratory on the first new type complaint, then the buyer or section manager is able to render a similar decision on subsequent cases. A noteworthy exception to this is the case of the Dolman dresses previously referred to. Too many stores consider the consumer to be only a disgruntled or angered customer.

Each Complaint Must Be Magnified To Be Seen Clearly. Under these systems of operation, each individual consumer complaint takes on a degree of seriousness for the store, for the garment manufacturer, for the textile processor and for the fiber producer far beyond the mere cost of the reimbursement made to the consumer. First of all, the laboratory appraisal of the customer's merchandise and a new one from stock from the same shipment or from very similar goods may indicate that the customer is entirely right in her objection to the merchandise from the standpoint of the consumer or user. Perhaps the dress, blouse, blue denim dungarees, sport shirt, curtain, or whatever it may be, is so weak or poor in some functionability requirement that every item in the same shipment was probably equally unsatisfactory.

It is small consolation to the laboratory technician then to be told that, "I sold several hundred of these, and this is the only complaint." This may be true, but the concern of the store should then be with the unvoiced but sometimes angry disappointment in the minds of the other purchasers.

Let us assume that the buyer, at the insistence of our laboratory, returns this article to the manufacturer. He has sold thousands, and perhaps again this is the only complaint the manufacturer has received. He has sold thousands, not just hundreds, and he cannot be blamed if he is skeptical about an individual consumer complaint about his goods. It takes time then for sufficient volume of merchandise to be returned to him to make him conscious of the seriousness of some flaw in his goods or in the article he has manufactured. If he has purchased his goods from jobbers, there may be no way for him to trace back to the textile processor in order to find out where the merchandise was damaged. If he deals with a primary producer or his contacts are with only a few finishers and dyers, then it is possible to pinpoint the flaw.

It has been our point of view that a justified consumer complaint should be of as much interest and value to the producer of the textile fabric and perhaps even to the yarn producer as it is to the store selling the merchandise to this customer.

Let's Look at Blouses. Let us

take a single merchandise category; for example, women's blouses. These are available at a wide range of prices. They are made of cotton, wool, linen, rayon, acetate, silk, nylon, Orlon, Dacron, and blends of two or more of any of these fiber pairings. They vary from utilitarian type fabrics with relatively little ornamentation to high-style merchandise marked with fragile and costly decoration.

In our system of analysis of complaints, we have set up 23 primary causes or reasons for the consumer to complain. The first 13 of these seen in the table [on page 143] are most generally those blamed on the consumer. I do not mean to say that in every case in these first 13 and in No. 23 the consumer is at fault, because there are some washing-shrinkage cases and color damage in washing, for example, which are the fault of the merchandise, and the article simply was not washable. Generally speaking, however, consumer mistakes in washing methods have led to most of the damage about which complaints have been made.

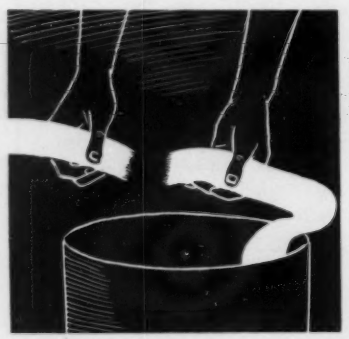
Similarly, cases 14 to 22, inclusive, are generally the fault of the merchandise; but the seam failure may have been caused by an abnormal pull or strain for which the garment should not be held at fault. Also, the sun exposure might have been abnormally great, or the consumer had the gas-faded article for such a long time that, regardless of the degree of protection

Worsted

Try These Quality Pointers for More

Here's how to make an even piecing that will pass through the fallers without giving trouble . . . and make even stock:

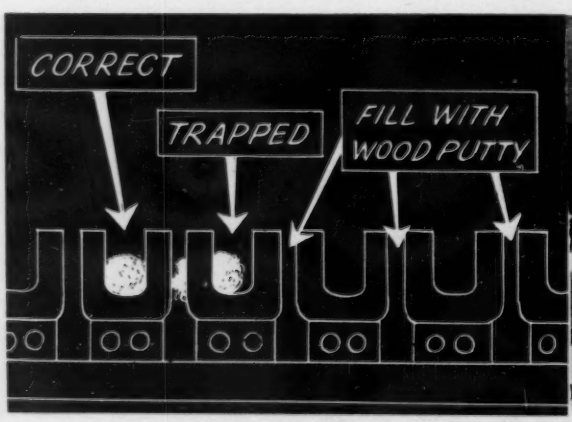
STAFF INTERVIEW
EXCLUSIVE



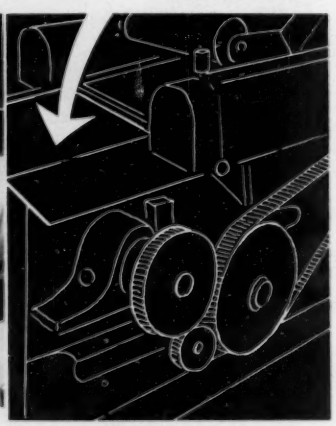
Square up ends of sliver . . . .

Then pull out about 4" in the center of each end . . . .

About 50% stock has been removed. Ends look like this . . . .



This electric stop motion features easy threading. However, unless care is taken in placing the stock in the porcelain guides, the end may be split so that part of it passes between the sides of adjacent guides or is trapped there. To prevent the end splitting and the resulting stretched stock, spaces between guides may be filled with wood putty, or the mill may make its own guide board of wood; sanding and shellac make it smooth.



When stock is oily, the rubber carrier apron suffers. A weekly cleaning of the apron will reduce the action of the oil, prolonging the life of the apron.

given by inhibitors, the color change took place.

It will be noted from this table that the most common cause of damage in blouses is careless ironing. There are 328 blouses being damaged by this cause, of which 311 are acetates. This leads us to the challenge as to whether, if the labeling of the garments had been better and more complete as to fiber identity and with specific ironing directions, many of these complaints might have been avoided.

The most significant failure on the part of merchandise in the blouse field is in the slippery nature of these fibers and yarns, and shifting of the yarns accounts for 101 of the 1438 garment damage cases.

It should be encouraging to the textile producers to note that the customer was held to be at fault in 73.5% of the blouse damage complaints, with only 26.5% being the fault of the merchandise; but these 26.5% should be multiplied by the number of blouses made identical with those about which these consumers complained. This total would be astronomical.

Conclusions. Let us look at each justified complaint as a serious flaw somewhere in our production line and correct the error. Let us develop and use standards spelling out the end-use performance levels known to give good consumer service. Let us label our goods with all pertinent information.

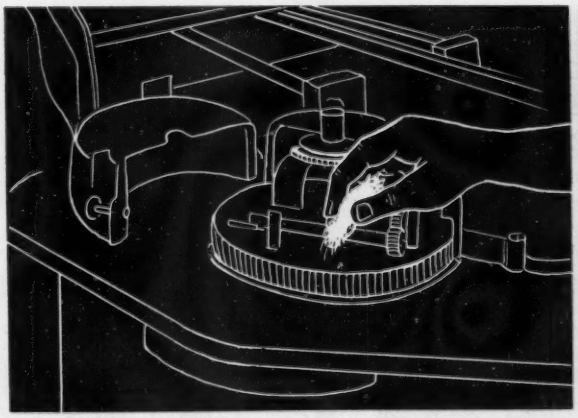
Efficient Gill Reducer Operation

Make short lap or piecing. If the piecing is too large, when the stock reaches the fallers the oversize end may break faller pins or pull pins out of fallers.

Close one end, letting other remain open . . . .

Tuck closed end between open end . . . .

And roll gently to press together.



Clean the coiler head each shift before running the machine. Waste accumulates between rubbers and in gears. Clean all rolls to prevent wear.

Dirty fallers mean uneven stock—the faller pins must have adequate working space. Each week, or more often if necessary, remove fallers from machine, blow-off, and wipe down the pins to remove oil, grease, foreign matter, and short fibers. Remember, on some greasy type wools the contamination is greater.

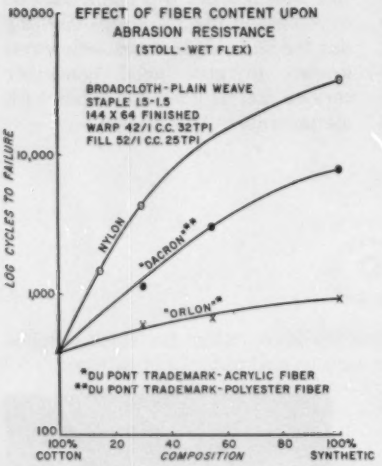
The Behavior of Cotton-Synthetic Blends

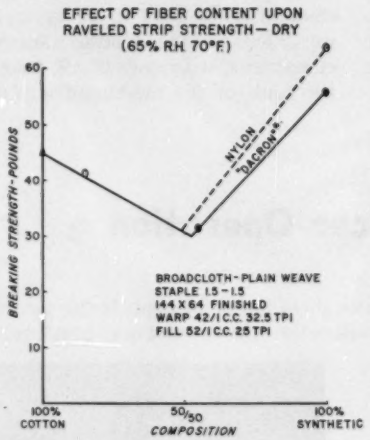
Here are some of the effects that the amount, placement, and fabric construction have on test results designed to help evaluate actual use performance.

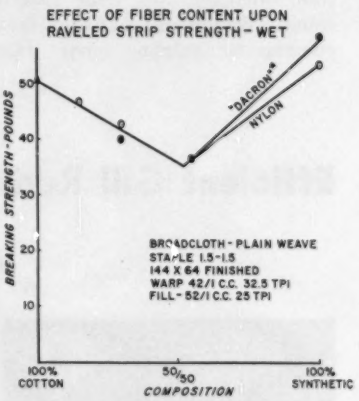
BY J. B. QUIG*
Textile Fibers Department
E. I. du Pont de Nemours & Co., Inc.

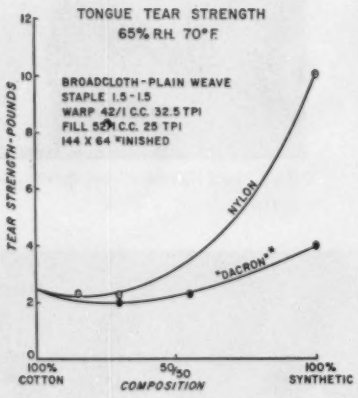
ABSTRACT

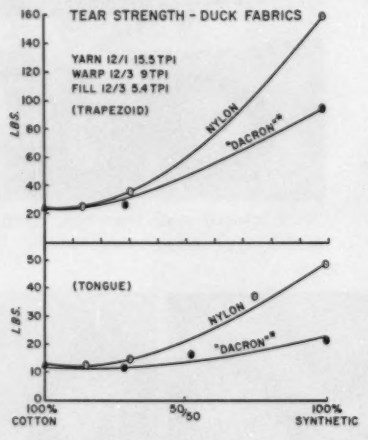
SEVERAL synthetics have been blended with cotton to achieve enhanced end-use properties: Dacron for men's- and women's-wear to achieve wrinkle resistance, press retention, and quick drying; nylon for home furnishings to lend durability and

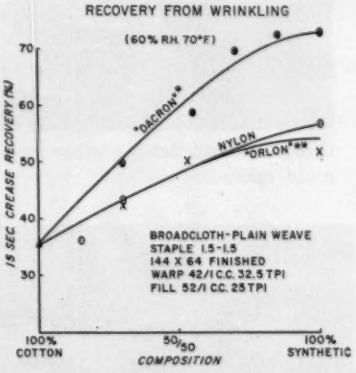


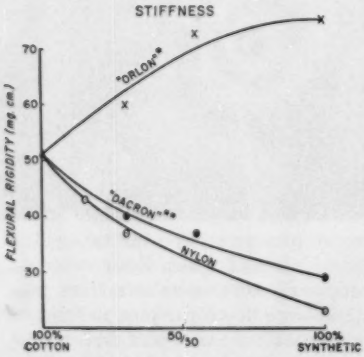


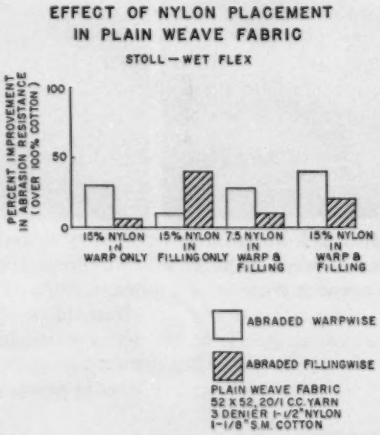


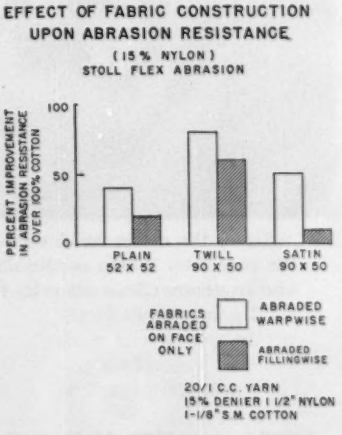












toughness; rayon to contribute to handle, drape, and modification of luster.

Research has been carried out by Du Pont on synthetic-cotton blends in which several variables were controlled: fiber content, fiber placement, and fabric construction. A preliminary study of the results of this research points to several conclusions:

1. It is desirable to explore end-use requirements before deciding on the amount and placement of synthetic fiber when blending with cotton.

2. Research on gross, intermediate, and fine structure of fibers in the blend should contribute to blend engineering.

3. Fabric construction is an important variable affecting the performance of synthetic - cotton blends.

4. Resistance to abrasion, tear strength, and wrinkling are enhanced by blending with true synthetics; flexural rigidity was reduced, bulk was not significantly affected.

5. The importance of further research in aqueous treatments and heat-setting to influence pilling, dimensional stability, and resilience has been emphasized.

6. Future research on the difference in extensibility of cotton and synthetic fibers on the tensile strength of fabrics at low synthetic concentrations should improve synthetic-cotton blends.

Some of the quantitative effects of the variables on test results for abrasion, strength, wrinkle recovery, and stiffness, are presented here in graph form.

*From a paper, "An Introduction To Blending Synthetic Fibers With Cotton" presented at a Seminar on Blend Engineering at Brooklyn Polytechnic Institute.

Man-Made Fiber Consumption Increased 353% in 17 Years

OVER THE 17-year span from 1937 to 1953, consumption of the man-made fibers increased by 1,205,000,000 pounds, a gain of 353%, while the corresponding increase for cotton, wool, silk and linen combined was 594,000,000 pounds or 14%. This and other information on man-made fibers in the textile industry are given in a special supplement to the June 1955 "Textile Organon," statistical bulletin of the Textile Economics Bureau, Inc.

The 1953 data of the study are broken down into 130 end-uses and show the poundage consumption of cotton, wool, linen, silk, and the man-made fibers in each end-use. Here are some interesting facts found in the supplement:

In men's and boys' apparel, end-use consumption of the man-made fibers increased 128,000,000 pounds or 376% between 1937 and 1953. During the same period, the other fibers (cotton, wool, silk, and linen) increased 161,000,000 pounds or 16%.

In women's and misses' apparel, consumption of the man-made fibers showed a gain of 92% compared with a gain of 31% for the other fibers over the 1937-1953 period.

In the household uses category, man-made fiber consumption in these end-uses rose 545% from 1937 to 1953, while all other fibers increased 47%.

In industrial uses, man-made fibers showed a gain of 4157% from 1937 to 1953, while all other fibers lost 37%.

Cloth Room

Avondale's Point System of Grading Cloth

BY GEORGE W. HAYNES*
Avondale Mills

OUR POINT grading system was designed to protect our customers and yet provide a systematic method for our inspection department.

General Considerations. There are two main considerations in grading cloth: (1) the frequency of defects present, and (2) the seriousness of the defect. The seriousness of the defect is determined by two principal factors: (1) the intensity of the defect, and (2) the size or length of the defect.

Intensity (or "obviousness" or "visibility") affects whether a cutter will see the defect or not, and if he does, whether he will cut it out or cause a defective ("second") garment, depending on his practices.

Length also affects the obviousness of a defect, and in addition, it determines how many panels or pieces (and hence garments) may contain the defect. Therefore, length is more important than intensity.

The simplest possible system that will take both of these factors into account, will provide for a two-notch breakdown for each.

Let us divide intensity into two categories: (1) "Minor" (crudely defined as "obvious"), and (2) "Major" (crudely defined as "very obvious").

Let us divide length into two categories: (1) "Short" (up to 6" long), and (2) "Long" (6" to 18" long).

In order to use the smallest pos-

*From a paper presented during the ninth annual convention of American Society for Quality Control.

sible numbers, let us charge one point for the least serious defect. (A "short minor" defect — this is the basic unit defect.)

When we increase the intensity only of the basic unit defect, let us double the number of points, and charge two points for a "short major."

When we increase only the length of the basic unit defect, let us triple the number of points and charge three points for a "long minor" because length is more important than intensity.

When we increase both the intensity and length of our basic unit defect, let us quadruple the number of points. In other words, charge 4 for a "long major."

When the above is tabulated we have the following:

	Minor	Major
Short (0 to 6")	1	2
Long (6" to 18")	3	4

Advantages of System:

1. It uses the smallest possible points.

2. These numbers are chosen so as to reflect the seriousness of a defect from a cutter's viewpoint.

3. It takes into account and provides for the exercise of judgment which will be exercised in any event, whether we recognize it or not.

4. The table checks with common sense.

5. It provides a logical basis for setting up standard samples for reference use by the graders. Such samples will be more consistent and less confusing to the graders because a rational criterion exists for selecting the samples.

6. It provides a means for controlling the "strictness" of the grading without confusing the graders by changing their standards. It is only necessary to change the allowable number of points.

Employees Enjoyed Film-Discussion Program On American Economy

A UNIQUE movie that presented plenty of problems—but no cut-and-dried solutions — has helped employees of Westinghouse Electric Corporation better understand what makes American business tick.

Through the visual impact of the motion picture, coupled with a group discussion session, such business concepts as depreciation, capitalization, and "plowing-back" profits were made more readily understandable to employees. In addition, Westinghouse employees enjoyed learning what makes the American business economy operate.

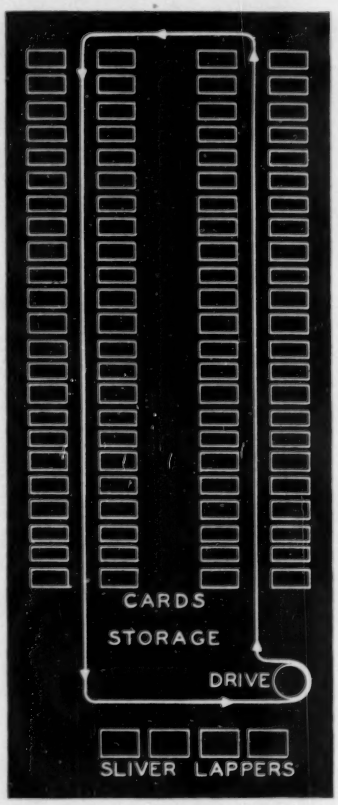
These are a few of the significant disclosures of a survey conducted by Opinion Research Corporation to learn Westinghouse employee reaction to a 45-minute film entitled "It's *Your* Decision," a realistic account of the day-to-day problems which business managers often face.

Photographed in color, and starring Hollywood's William Lundigan, the movie pin-points the problems of three ex-G.I.'s who pool their resources to go into the trucking business. It follows them as they try to raise capital, provide equipment, figure depreciation, reward employees and stockholders, and meet many other problems involved in starting and maintaining a business.

At a crucial point in their business life, where they must make a choice as to whether to quit cold or keep trying to establish themselves, the movie leaves the three ex-G.I.'s and throws the unanswered problems to the audience. At this point employees participate in a discussion session in which they must make the final decision.

The program was conducted in conjunction with the American Economic Foundation.

Conveyor Lets



THE PATH OF THE CHAIN is counter-clockwise, servicing 92 cards and four sliver lappers at a card doffing rate of about one can per minute. Chain travels the 460-foot cycle in 35 minutes.

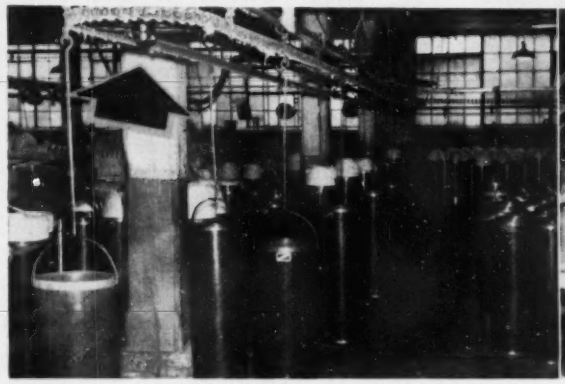
STAFF PREPARED

EXCLUSIVE

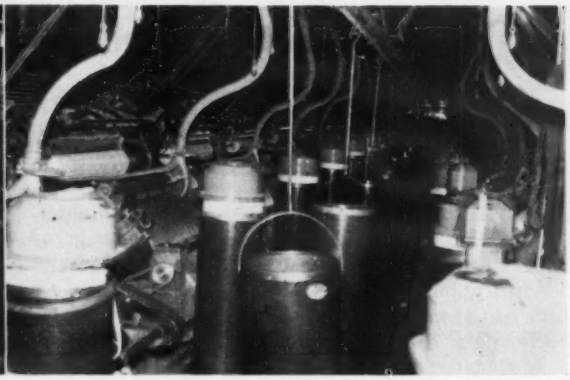
THE TASK of doffing the filled sliver cans by truck in the card room can account for as high as 50 per cent of the card tender's time. This fact, in addition to a set of conditions characteristic of the mill, prompted installation of a traveling conveyor in card aisles at Glendale Spinning Mills, Ltd., Hamilton, Ontario.

The conveyor, developed by company president W. V. Holton, was installed five years ago. Because the time spent by operatives in doffing was substantially reduced, card tenders can now easily handle 46 cards per operative without addition of any auxiliary assistance, where 28 cards were

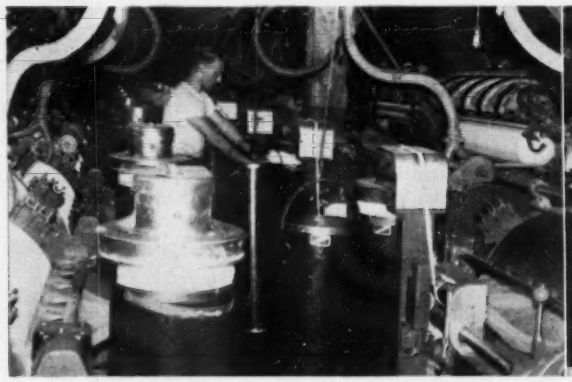
Card Tender Handle 46 Cards Instead of 28



DRIVING UNIT (arrow) is a one-hp motor with a reducing unit; drive requires little or no maintenance.



A LINE OF CANS travels down a card alley on the way to the lapper stand.



CARD OPERATOR doffs a full can, removes empty from chain, places full can on chain, and sets empty under coiler.

LAPPER OPERATOR removes full can, replaces with empty from storage area (shown here at left) rather than from lapper feed.

handled before.

Problems. Before installing the conveyor, certain factors made truck doffing more difficult than in the usual card room: aisles at card deliveries were narrow, leaving not quite enough space to push a doffing truck through them conveniently. In addition, rough floor surfaces made pushing individual cans down the alleys equally difficult.

The Conveyor. The unit consists of a joined chain traveling a generally oblong path for a distance of about 460 feet. It services two card delivery alleys and a stand of sliver lappers. Can holders are spaced six feet apart along the chain, and the conveyor is driven by a one-hp motor with a reducing unit so that it makes one revolution every 35 minutes.

Examination of the accompanying flow diagram and photographs taken at various points along the traveling conveyor route will more clearly illustrate its operation.

The Card End. There are 92 cards in Glendale's department, set up delivery-to-delivery in two double rows of 23 machines. The speed of the chain was set to production in this department. Figuring about eight pounds per card per hour, with each can holding about 12 pounds, the chain accommodates a total doffing of about one can per minute.

Card operators doff a full can, remove an empty from the conveyor, replace it with the full one, and set the empty in place beneath the coiler head. The chain is not stopped during this movement.

The Sliver Lapper End. When the can holder containing the filled can reaches the stand of four lappers, one of the two operators servicing this unit doffs the full can and hangs an empty can in its place.

This station does not require immediate placement of filled sliver cans at sliver lapper feeds; space is provided to accommodate filled and empty sliver cans.

Eventually Glendale plans to link card doffing directly with draw frames; currently a second traveling conveyor joins the sliver lapper station and the drawing department.

Contact with Retailer, Brand Identified, Store Display

STAFF INTERVIEW
EXCLUSIVE

HARDING Carpets, Ltd., Brantford, Ontario has accomplished sales coverage and name identification using six salesmen and some original merchandising techniques.

In Canada, mills have the problem of distributing to a relatively small population of 15 million people who are scattered over a wide area; further, about 25% of this population is centered in the Province of Ontario.

To meet the problem, Harding maintains contact with a number of retail accounts in key centers with established distributors throughout Canada who complete the regional coverage.

Name identification is accomplished through national advertising at the consumer and trade levels. Service is maintained through sales offices and showrooms in Montreal, Toronto, and Vancouver; they are in continuous contact with the mill.

To aid the retailer handicapped by lack of space and handling facilities for roll goods, Harding has a new design of a low-cost display stand and a sample program which utilizes standard mat-sized units. Since these units are always salable, the dealer can recover his sample cost after use in the display.

Newspaper mats, signs, and other merchandising aids are made available to dealers.

How Much Testing Should a Mill Do?

BY N. L. ENRICK
Institute of Textile Technology

EXCLUSIVE

EVERY MILL asks the question: "How much testing should we do?" This can be determined easily, based upon three recognized factors:

1. Processing Variations
2. Sampling Error
3. Sampling Risk

The manner in which these three can be expressed in simple figures will be described. Next, ready-made tables are furnished, which will tell you how much testing to do.

Processing Variations. The amount of variation in a product resulting from a mill's processing is revealed in the average range. The range is the difference between the highest and lowest value in a number of tests. Table I shows a typical set of test results and the ranges obtained. It is then shown how the average range in per cent is obtained.

Next, by simple multiplication with the proper factor from Table II, we obtain the more useful value known as "Coefficient of Variation," to represent the variability of the process.

Sampling Error. To control the exceedingly large output of a mill, we usually test only relatively small random samples of a few bobbins at a time. From the test results, we determine the average of these bobbins, which we consider an estimate of the "true" average that we might have gotten

TABLE I. Computation Of Coefficient Of Variation Of Card Sliver

Each Sizing Test Represents One Yard of 48-Grain Sliver

Card No.	37	42	29	16
	46.4	44.3	45.5	48.1
	47.4	42.2	48.1	45.5
	50.9	43.1	46.6	47.8
	48.1	45.6	46.6	49.2
Range	4.5	3.4	2.6	3.7
Card No.	54	17	7	106
	50.0	48.0	52.3	50.0
	50.8	49.8	52.3	51.9
	48.8	46.1	50.6	50.7
	49.7	50.6	53.8	50.7
Range	2.0	4.5	3.2	1.9
Card No.	27	18	94	84
	48.6	46.1	48.5	51.5
	49.6	53.0	47.7	48.8
	47.7	48.6	48.7	50.5
	49.5	44.3	46.3	51.3
Range	1.9	5.6	2.4	2.7

Summary:

a. Total of Ranges ..... 38.4 Grains

b. 38.4 Grains divided by 12, the number of ranges used, gives the Average Range of..... 3.2 Grains

c. 3.2 Grains divided by the average sliver weight of 48.4 grains gives the Average Range Per cent of ..... 6.6 Per cent

d. 6.6% multiplied by the Factor 0.49 from Table II gives the Coefficient of Variation of ..... 3.2 Per cent

TABLE II. Factors for Converting Average Per Cent Range to Coefficient of Variation.

No. of Tests per Sample	Factor for Converting Average Range to Coefficient of Variation
2	0.89
3	0.59
4	0.49
5	0.43
6	0.40
8	0.35
10	0.32
12	0.31

The factors above are used in the simplified method of determining coefficients of variation, as illustrated in Table I.

by testing all the bobbins produced. However, we must make an allowance for the sampling error, the "Allowable Sampling Error."

How do we establish the proper Allowable Sampling Error? We start with technical considerations. For example, if to control weights on a given process the change gears available average 33 teeth, then it is obvious that the mill is limited to a manufacturing precision of one tooth per 33, or 3%. This permits adjustments of ± 1.5%, and there would consequently be no sense in choosing an Allowable Sampling Error of less than this ± 1.5%.

However, a mill will frequently decide that for its particular type of styles it does not require the degree of precision of control technically attainable. It will then choose a higher or, in other words, wider Allowable Sampling Error. This has cost saving advantages, in that it involves less gear changes in actual production. But this saving is attained at a sacrifice in precision of control.

Present practice in many weaving mills is to establish the actual Allowable Sampling Error at twice the value technically attainable. This would mean an Allowable Sampling Error of ± 3.0% for the illustration above.

In yarn mills supplying the knitting trade, the Allowable Sampling Error is usually only about 30% above the value technically attainable. This would mean an Allowable Sampling Error of ± 2% for our aforementioned example.

TABLE III. Number Of Tests Required For A 0.3% Sampling Risk

Coefficient of Variation % V	Allowable Sampling Error, % E									
	1	2	3	4	5	6	8	10	15	20
	Number of Tests Required									
1.0	9	2	1	1	1	1	1	1	1	1
1.5	20	5	2	1	1	1	1	1	1	1
2.0	36	9	4	2	1	1	1	1	1	1
2.5	56	14	6	3	2	2	1	1	1	1
3.0	81	20	9	5	3	2	1	1	1	1
3.5	110	28	12	7	4	3	2	1	1	1
4.0	144	36	16	9	6	4	2	1	1	1
5.0	225	56	25	14	9	6	4	2	1	1
6.0	324	81	36	20	13	9	5	3	1	1
8.0	576	144	64	36	23	16	9	6	3	1
10.0	900	225	100	56	36	25	14	9	4	2

Example: Given a % V of 3 and a % E of 4. To find Number of Tests required, enter Table at 3% level. Proceed horizontally until column for % E of 4 is reached. This yields 5 as the number of tests required.

TABLE IV. Number Of Tests Required For A 1% Sampling Risk

Coefficient of Variation % V	Allowable Sampling Error, % E									
	1	2	3	4	5	6	8	10	15	20
	Number of Tests Required									
1.0	7	2	1	1	1	1	1	1	1	1
1.5	15	4	2	1	1	1	1	1	1	1
2.0	27	7	3	2	1	1	1	1	1	1
2.5	42	11	5	3	2	1	1	1	1	1
3.0	61	15	7	4	2	2	1	1	1	1
3.5	83	21	9	5	3	2	1	1	1	1
4.0	108	27	12	7	4	3	2	1	1	1
5.0	169	42	19	11	7	5	3	2	1	1
6.0	243	61	27	15	10	7	4	2	1	1
8.0	433	108	48	27	17	12	7	4	2	1
10.0	676	169	75	42	27	19	11	7	3	2

Example: Given a % V of 4 and a % E of 5. To find Number of Tests required, enter Table at 4% level. Proceed horizontally until column for % E of 5 is reached. This yields 4 as the number of tests required.

TABLE V. Number Of Tests Required For A 5% Sampling Risk

Coefficient of Variation % V	Allowable Sampling Error, % E									
	1	2	3	4	5	6	8	10	15	20
	Number of Tests Required									
1.0	4	1	1	1	1	1	1	1	1	1
1.5	9	2	1	1	1	1	1	1	1	1
2.0	16	4	2	1	1	1	1	1	1	1
2.5	25	6	3	2	1	1	1	1	1	1
3.0	36	9	4	2	1	1	1	1	1	1
3.5	49	12	5	3	2	1	1	1	1	1
4.0	64	16	7	4	3	2	1	1	1	1
5.0	100	25	11	6	4	3	2	1	1	1
6.0	144	36	16	9	6	4	2	1	1	1
8.0	256	64	28	16	10	7	4	3	1	1
10.0	400	100	44	25	16	11	6	4	2	1

Example: Given a % V of 4 and a % E of 2. To find Number of Tests required, enter Table at 4% level. Proceed horizontally until column for % E of 2 is reached. This yields 16 as the number of tests required.

Acceptable Sampling Risk. In addition to the Allowable Sampling Error, we also need to choose an "Acceptable Sampling Risk."

This may be expressed in terms of "chances" of error or per cent risk due to sampling fluctuations. Typical values used are:

1. Three "chances" out of one thousand, or risk of 0.3%.
2. One "chance" out of one hundred, or risk of 1%.
3. One "chance" out of twenty, or risk of 5%.

For ordinary control purposes in

the textile industry we usually do not want to run a risk greater than 1%. However, for spots where more sensitive control is desired, a risk of only 0.3% is preferred. An example of a spot where relatively sensitive control is desired would be the process, usually drawing or roving, where primary gear changes are made to keep the stock weight or count in line.

Ready-Made Tables. Ready-made tables, from which the number of tests required can be read off, are furnished as follows:

Table III for sampling risks of 0.3%.

Table IV for sampling risks of 1%.

Table V for sampling risks of 5%.

Examples along the bottom of each table show how to use them.

Examination of the entire set shows that:

1. The tables with relatively lower sampling risks show that more testing needs to be done.
2. If your process variability is good, as evidenced by a low Coefficient of Variation, the table shows that less testing needs to be done.
3. The smaller the Sampling Error desired, the more testing is required.

The formulas used in computing the tables are too complex to be discussed here. However, the author will submit these to persons requesting them.

It is emphasized that the methods furnished here for determining proper number of tests are those utilized in routine quality control work. In research and special experimental investigations more refined methods are sometimes required to obtain best results. These are not of primary concern, however, to the man interested in routine quality control work in the mill and in determining the best number of tests for this purpose.

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Helping People To Think

BY RINGGOLD ARDEN

EXCLUSIVE

LAST October one of our readers wrote to us commending the article, "Creeping Socialism," in the October Issue. He said:

It seems to me, however, that the important thing is not "Is Socialism Creeping" or "What is Socialism" or "Is the TVA Creeping Socialism." The important thing is what the voters understand and think. It seems to me that the majority of our voters like to repeat skillfully-worded, strong-language, half-truths that were put in their mouths by politicians and commentators, rather than statements showing intelligent thinking. They do not know what socialism is except that it is something bad. Publicity has taught them that TVA is something good. If you question the majority of voters on the reasons for their beliefs and on the reasons for the pat expressions they repeat, they either become insulted, or become confused in their ignorance.

What I would like to see on this subject is effective publicity, not addressed to people who already know the facts, but addressed to those who don't know them. How can we make these people think?

For a number of years TEXTILE INDUSTRIES has published articles that bear on the problems of the entire textile industry as affected by what we have termed the "neo-crackpotic" economic theories which have been so rampant for the past 20-odd years. These articles have certainly been aimed at trying to get people to think, but it is quite likely that the readership of TEXTILE INDUSTRIES would, in the main, have already done much thinking about these problems and have arrived at rather definite conclusions.

We certainly do need to reach those persons who see only the little bit of good in a generally evil thing, and try to make them understand that ultimate good can not result from anything which is basically evil.

In 1933, our federal government embarked on a series of adventures in socialism on credit. We were to have all of the good, pleasant, beneficial things promised by socialism, and postpone indefinitely the time when the harsh, bitter realities of a socialist regime had to be considered.

For 20 years, we have had a population largely bemused by the pleasant aspects of the socialist system, and each time that the day of reckoning seemed to be approaching, we managed to put it off a little further so that our children and grandchildren could deal with it, and by the means of postponement, have made it a little more difficult for them to deal with it successfully.

Probably the reason that we have done these things is because it is so very difficult to get people to think. A noted educator once remarked, "We must view with profound respect the infinite capacity of the human mind to resist the introduction of useful knowledge."

What most people want is good news, not useful knowledge. People will enthusiastically elect to office some demagogue because he has repeatedly promised that he positively will not raise taxes, and then they will reelect him after he has raised the taxes if he can just make it look as if he has taxed somebody besides the people who vote for him.

It seems impossible to make people understand that no matter who collects the taxes, *they* pay them. The economic follies of the past 22 years have all been made possible by this peculiar quirk in the human mind, which leads a man to agree to pay any exorbitant future price for a present benefit.

The American people have been pretty well convinced that socialism is not a good political system, but when this thing, which they seem to agree is bad, is presented to them under another name and they see that it has beneficial aspects, they welcome it and will reelect the politicians who continue to give them doses of this dangerous drug. Here again, we encounter the difficulty of trying to get people to think.

There is not the slightest doubt that many dangerous socialistic adventures were undertaken during the so-called New Deal. Only two or three of the promises in the Democratic Party platform of 1932 were carried out, while most of the promises in the Socialist Party

The vice of capitalism is the unequal distribution of its blessings.
The virtue of socialism is the equal distribution of its miseries.
—Winston Churchill

platform were enacted into law. The leaders of the socialists themselves were critical of many of these socialistic experiments because they sought simply to confer the benefits that the socialists promised without following the socialists' plans for making the benefits possible.

The New Deal plan was simply to confer the benefits and charge the cost up to the future. The socialist plan at least had the advantage of being an honest effort at pay-as-you-go, regardless of whether the effort was practical or the plan would work. In criticizing some of these quasi-socialist schemes, Norman Thomas, the leader of the Socialist Party, was quoted as saying in 1934:

"The TVA is the only genuinely socialistic act [in the New Deal]—a flower in the midst of weeds."

Although Mr. Thomas enthusiastically looked upon TVA as real socialism, according to the best traditions of the socialist doctrine, it has been in fact socialism on credit, because TVA has not paid its way. It has been defined as, "A river that flows through seven states and drains 41."

So long as 41 are there to be drained for the benefit of seven, this kind of local socialism can work, but when you try to make it work all over the country, it fails, because there is no drainage area to work on. The New Deal philosophy discounts this obvious economic fact by draining everybody and then trying to distribute this drainage as benefits to everybody, while at the same time putting the deficit down in the books as an addition to the national debt.

Our country owes its fabulous wealth and the incredible productivity of its people primarily to one thing, and that is our form of government, which leaves people free to do pretty much as they please so long as they obey reasonable regulations formulated by their own representatives to protect the rights of all people.

There are, in general, only two types of government—the Authoritarian and the Libertarian. Under the Authoritarian government, you do as you are told, while under the Libertarian form you can do pretty much as you please.

There is practically no workable intermediate type of government which can last. If the authorities possess the power to take away from the people the right of participating in government, the tendency is to constantly increase the power of those authorities and finally to consolidate it in one person. Since the principal ambition of that one person is to retain the power which he exercises, and that is his constant concern day and night, progress in a country so governed comes almost completely to a standstill.

Nothing can be done without the approval of the dictator or his trembling henchmen, who are all afraid to ever change anything, so there is no change. Any change is looked upon as hostile to the established system and the welfare of those operating it. Under such a system of government, Europe made practically no intellectual or economic progress in a thousand years.

Under a Libertarian form of government, the people of the United States and some of those in Europe have made unbelievable progress in making life longer and better and more enjoyable.

Just as every religion houses many sects, all adhering to the same basic beliefs, so do the socialists include many different groups, such as Nazis, Fascists, and Communists. Each of these groups is loud in claiming that its is the only true socialist faith, and the Communists developed undying hatred of the Nazis, and vice versa. Their differences arose over disputes about procedure rather than disagreement about the basic proposition that the State should own and operate the means for the production and distribution of wealth.

The Communists frankly and freely admitted that no person in his right mind who was getting along reasonably well under any existing political regime would abandon it in favor of socialism. A person had to be a little bit crazy to be a Communist unless he was a misfit who could not expect to prosper in a competitive economy. The Communists therefore insisted that an authoritarian government was an absolute necessity to impose socialism on a nation.

Some of the milder socialists felt that people could be persuaded to accept the socialist program if it only went far enough to loot the wealthy and left the poor alone. Communists, who are simply radical Socialists, cherished no such illusion, and realized all too well that force would be necessary to institute any such lunatic system as they proposed. Experience seems to have shown that the Communists are right, because practically every country which gave the Socialists a chance to put their plans into effect without destroying popular government has since thrown out the Socialists because their plans were failures.

If the inhabitants of Communist countries could vote, they would probably renounce Communism with even greater enthusiasm than free people have tossed out Socialism after learning the hard way what a fraud it is. Instead of more uniformly distributing the benefits made possible by a competitive economy, the Socialists not only managed to shut off the flow of benefits, but they dried up the springs of progress which would produce greater benefits.

As Winston Churchill wittily put it, "The vice of capitalism is the unequal distribution of its blessings. The virtue of socialism is the equal distribution of its miseries."

Too many of us are like Faust, who, when told by the Devil, "Sign here and all of these wonderful things that you want are yours," will reach for the pen without thinking. Thinking is a laborious process, which is generally avoided as much as possible, and it is always easier to take something that *looks* good, than to painstakingly find out first whether it *is* good.

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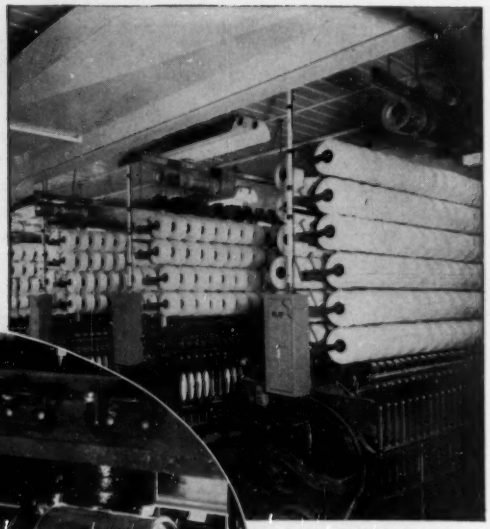

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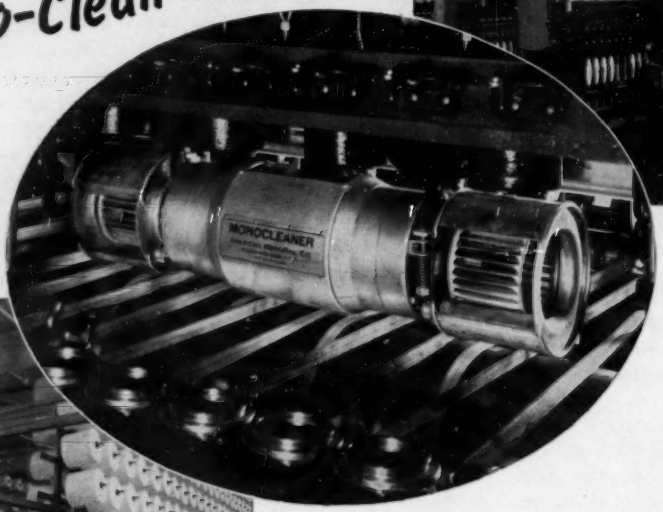

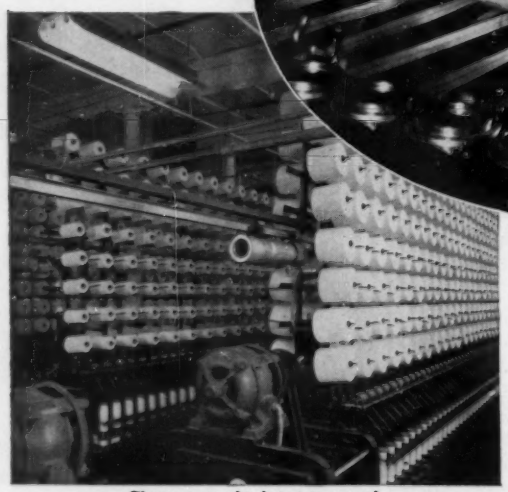

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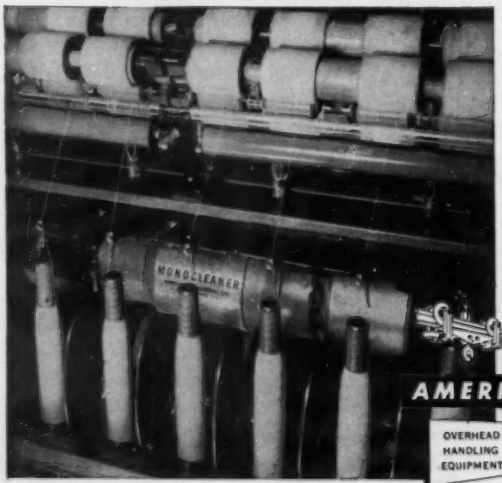

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Here's How We Systematized Waste Control

BY MALEY CHAGRO
EXCLUSIVE

IT HAS been said that waste can make or break a mill, and many a mill official who has visited the waste house on occasion and seen good staple cotton being baled as waste, realizes the truth of such a statement. Costs not only soar but the margin of profit sharply diminishes when waste factors are abnormally high.

Where control is limited to over-all allocation of a definite percentage, mill-wise, instead of individual control of all waste producing units, abnormal waste factors will occur that are not easily detected. Where a mill has, for example, a 15% over-all waste percentage for its carded stock and slightly over 30% for its combed stock, the disadvantage of such a system lies in the fact that waste produced at one process may be excessively high and not enough waste taken out, consistent with quality, at another process.

Recommendations by textile machinery manufacturers, particularly from picking through combing, concerning settings and waste percentages, are usually very accurate and can safely be used as a basis in determining the operating percentages a mill desires for its stock, which may include dustings, picker waste, air-cleaner, licker-in, strips or noil, individually or collectively. The accompanying waste percentage control chart, which has been in use for many years in one mill, and which from its inception has constantly been improved to control every waste factor, shows at a glance the percentages of every unit and indicates clearly any high or low fluctuation from standard. Figures in bold face in the table indicate waste percentages above standard. (The mill used red ink.)

This mill, large enough to maintain a classing department, incorporated into the department's duties the entire control of waste.

(*Continued on page 157*)

BALED AND REWORKABLE COTTON WASTE PERCENTAGES

Waste Classification		Standard %	Week Ending... 10 Weeks %	1 Week %
		BALED WASTE		
PICKER:	Sweeps	—	—	—
	Dustings	.69	**.78**	.43
	Picker	1.74	**1.92**	.99
	Air Cleaner	.13	.12	.11
	Totals	2.56	**2.82**	1.53
CARDING:	Licker-in	1.27	**1.51**	1.11
	Sweeps	.75	**.77**	—
	Strips	4.00	**4.40**	2.81
	Totals	6.02	**6.68**	3.92
COMBING:	Noil	19.43	18.49	13.16
SPINNING:	Sweeps	.68	.63	.52
	Unsized Yarn	.31	**.34**	.18
	Oily Yarn	.10	.10	.09
	Clearer	.10	**.12**	.07
	Rov. & Scav.	.79	.75	.53
	Totals	1.98	1.94	1.39
SPOOLING:	Unsized Yarn	.74	**.76**	.50
	Oily Yarn	.02	**.03**	**.08**
	Sweeps	.07	.07	.06
	Totals	.83	**.86**	.64
SLASHING:	Sweeps	.14	.14	.06
	Unsized Yarn	.67	**.77**	.30
	Sized Yarn	.89	**.90**	.37
	Oily Yarn	.15	**.20**	.08
	Totals	1.85	**2.01**	.81
WEAVING:	Sweeps	.91	.83	**1.28**
	Unsized Yarn	.91	.64	**1.09**
	Sized Yarn	.23	.18	.10
	Oily Yarn	.11	.10	**.17**
	Rags	—	—	—
	Totals	2.16	1.75	**2.64**
TOTAL BALED WASTE:		34.83	34.55	24.09
		REWORKABLE WASTE		
PICKER:	Lap Waste	1.79	1.60	1.05
CARDING:	Lap Waste	1.56	1.39	1.36
	Drawing	.50	.41	.49
	Roving	.40	**.42**	.07
	Totals	2.46	2.22	1.92
COMBING:	Lap & Sliver	4.53	2.96	3.83
TOTAL REWORKABLE WASTE:		8.78	6.78	6.80

FACTS

about

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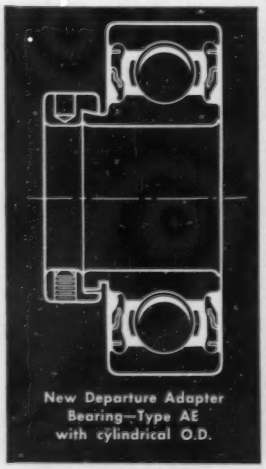

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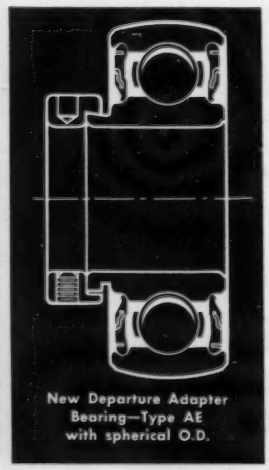

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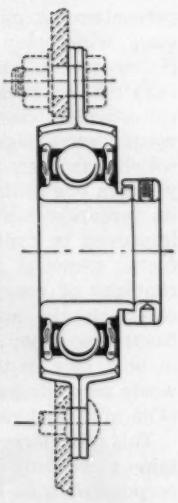

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NEW DEPARTURE • DIVISION OF GENERAL MOTORS • BRISTOL, CONN.

(*Continued from page 155*)
Under this control the overseer of every department received a baled and reworkable waste report every week and any high or low abnormal conditions were checked at once.

The superintendent had general over-all supervision of the control once the reports were released, and had constant cooperation from the classing department.

When the chart percentage control was first formulated it was decided that a standard would be set up from the first ten weekly waste reports and 10% arbitrarily added to each waste percentage figure as an allowable tolerance above average. Thus the total baled waste of 34.83% listed under standard on the chart actually is 110% of the average obtained from the first ten weekly waste reports.

The average percentage as follows: $0.3483 \div 1.10 = 0.3166$, or 31.66%. The over-all added percentage was 3.17%. At first glance this may appear as a sizable allowance and not in line with economy, but the allowance is spread through almost 25 waste classifications collectively from every department. For example, the standard opposite "air cleaner" in the picker column is 0.13. This means that the average $0.0013 \div 1.10 = 0.00118$, or approximately .12%, is so close to the standard 0.13 that a variable up to this figure has little significance and little can be done about it.

On the other hand, the average percentage for noil, 17.67%, against a standard of 19.43% should be constantly checked because of the 1.76% variation. When this figure becomes bold face, along with "picker," "licker-in," and "strips," a sizable percentage increase in waste is indicated. All figures, however, are closely checked weekly.

Standards were changed from time to time until all waste producing units and classifications were thoroughly checked and final percentages agreed upon. In the event that new machinery was installed and new standards were indicated, they were instituted as soon as the necessary data became available.

A ten-week average was always maintained. The indicated "One Week" column was added to the "Ten Weeks" figures, with the first week of the "Ten Weeks" figures dropping out. Thus a ten-week total was also available weekly for comparison with standard. Whenever a sharp fluctuation occurred, either a decrease or increase, other factors were immediately taken into consideration when noted under the "Ten Weeks" and "One Week" columns. Any holding back of waste at the week's end, such as partially filled boxes or bags, or tardiness, would reflect in those two columns.

If bold face figures (red ink) continually showed up under "One Week," it would indicate otherwise. Baled waste percentages were obtained by adding weekly departmental production and weekly departmental waste and dividing these totals into pounds waste of each classification. So thorough was this program that even "sweeps" were classified for nearly every department with the dual purpose of obtaining the percentage figures and thoroughly checking to see if good cotton waste was carelessly being thrown on the floors. All bags, boxes, and cabs, were clearly marked to identify waste and department.

Reworkable waste is always an individual mill's problem. What one mill will rework, another mill may discard as baled waste. If waste is reworked in a mill, it is seldom taken into consideration when baled waste percentages are added to the lay-down in the opening room. The exception would be if a new staple was to be processed, the initial lay-down may contain a percentage for the reworkable waste. After that, reworkable waste would be fed directly into the pickers.

There has been much discussion whether reworkable waste will weaken the fibers and reduce the tensile strength of the yarn. This again is an individual mill problem. This particular mill, as noted on the chart, reworked lap waste, drawing (all sliver), and roving waste, and still maintained very high break factors in its yarns.

What was formerly included in reworkable waste, but later classified as baled waste, was the scavenger waste from the spinning room. Admittedly, when a spinner removes a scavenger lap after withdrawing the scavenger stick, she not only cleans off good staple but the collected lint and short fibers from the rest of the stick, and this was later found as unsuitable as reworkable waste, especially for the medium and fine yarns the company produced.

Roving waste under "Spinning" in the baled waste factors only included oily, dirty, or slubby roving. Roving bobbins were removed with only a half or quarter layer to run and these were sent back to the card room where they were stripped and added to reworkable waste.

There were two roving stripping devices and machines. In one, the roving was stripped by a card clothing machine and the waste blown directly into large bags, thus eliminating 8 to 10 small receptacles formerly used, and which held collectively the amount of waste one bag would hold. The other was an air pressure stripper, but neither type was found to have injured the fibers to the extent that they could not be reworked, especially the card clothing stripping machine.

In this mill, reworkable waste assumed an importance not only in cost savings, but in production planning as well. Reworkable waste percentages, plus baled waste percentages, were the basis for a unit production control system for major processes, based on 100-lb production units. Thus all reworkable waste fed into the pickers was additional added production, production that in theory and in fact never went into cloth or baled waste but was nevertheless a production factor.

Actually the amount of work involved was not too complicated or extensive, once the control was set up and operating. A duplicate of all weekly departmental production reports, plus waste receipts from the waste house and picker room, were sent directly to the classing department where the waste percentages were calculated. Once the standard had been formulated, the handling of the

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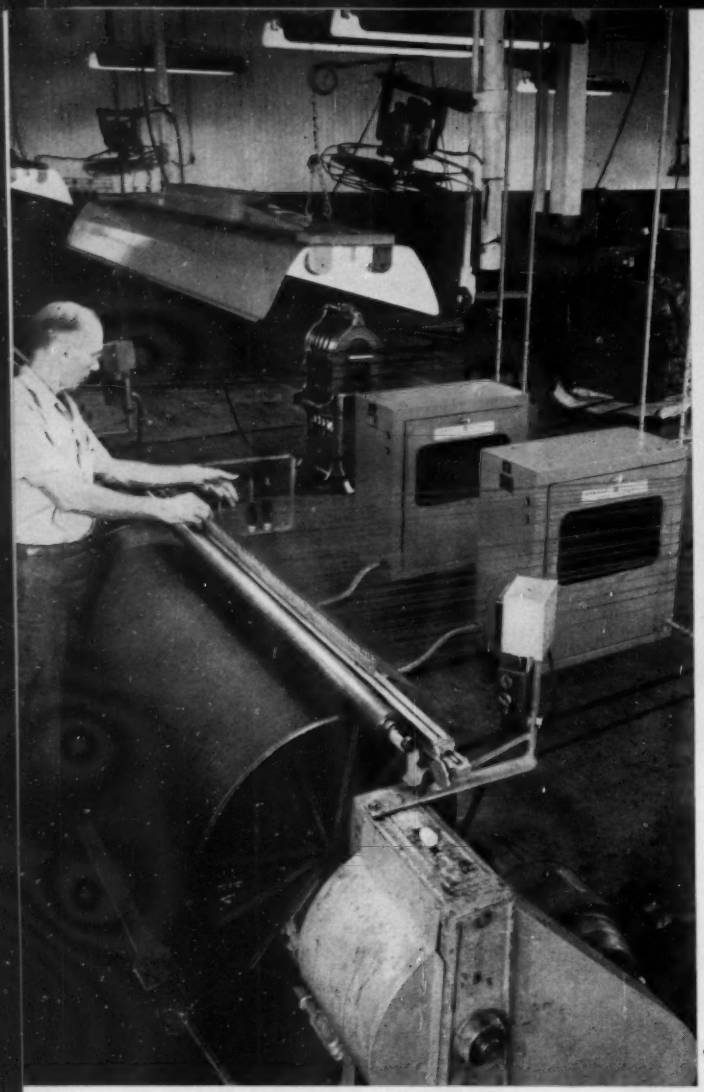
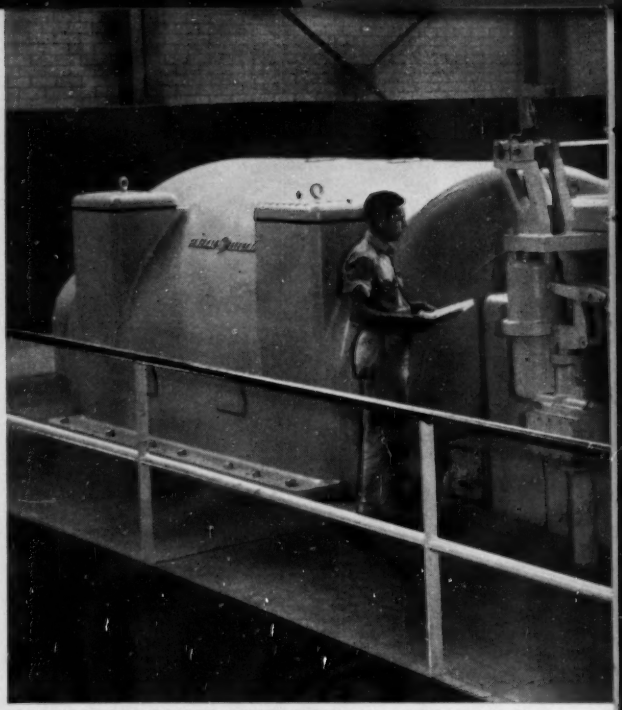
GENERAL ELECTRIC

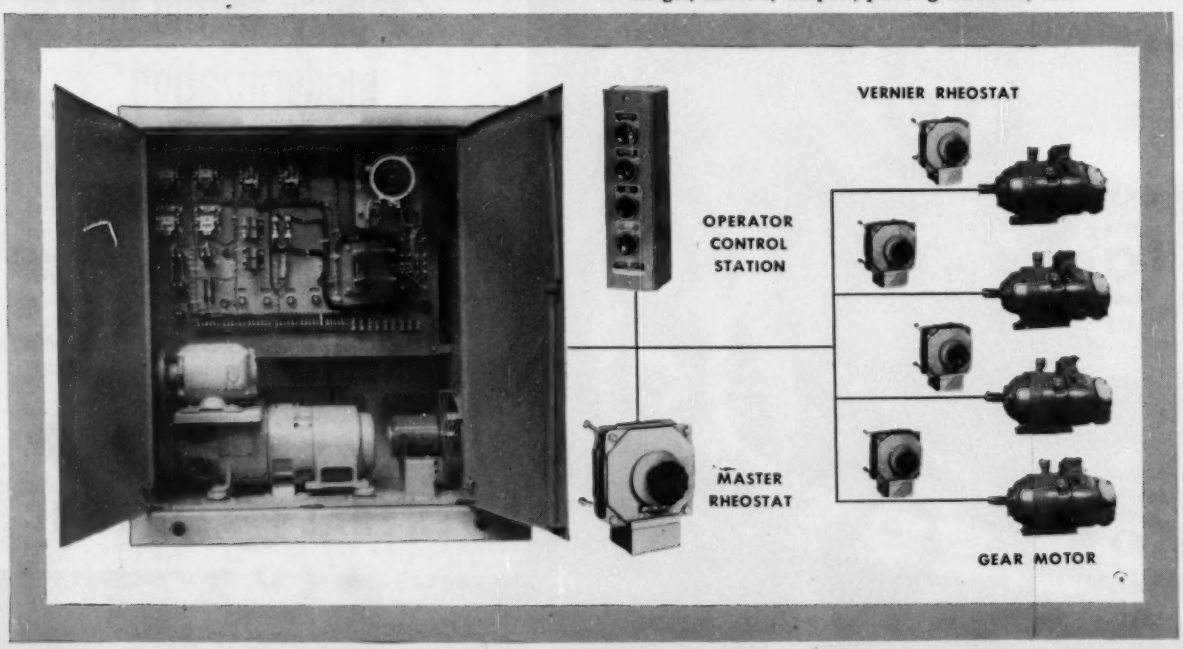




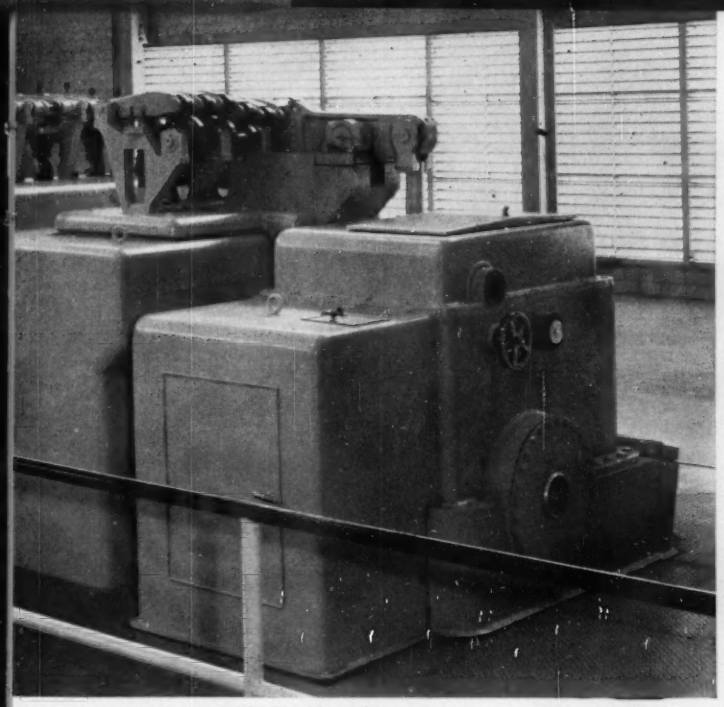
ECONOMICAL POWER GENERATION is possible with G-E steam turbine-generators. Electricity becomes a by-product

Flexibility of G-E helps textile mills

G-E SPEED VARIATOR provides integrated adjustable-speed drives from a-c power. Specialized forms drive finishing ranges, slashers, warpers, printing machines, etc.



SPEED VARIATOR power unit, operator's control station, rheostat, drive units can be installed almost anywhere to fit plant layout.



of the steam which is used for various process purposes. Many mills find it pays to use this economical prime mover.

drives and power systems increase production

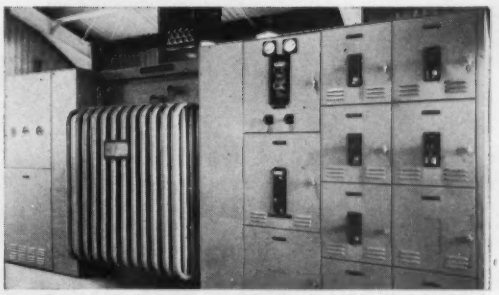
CHANGING MARKET CONDITIONS demand that textile mills produce a wider variety of fabrics faster and more efficiently. With General Electric's help, many mills are modernizing electrically to improve their quality control and to compete more effectively in today's market.

WHEN YOU MODERNIZE with G-E electrical equipment, you benefit many ways. For example, G-E power-system equipment is factory-assembled to cut installation time and cost. This equipment saves space, adapts readily into your existing systems and can be expanded easily and at low cost because of its "building-unit" design. And G-E drives are engineered to last longer, with less maintenance, in textile-mill service. These are important considerations in your plant modernization program.

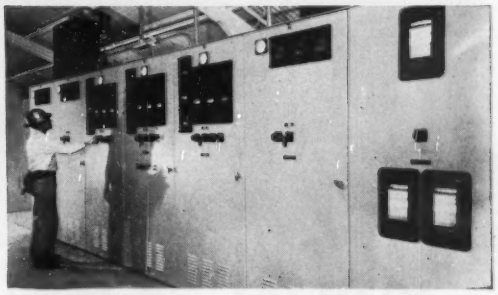
FOR ELECTRICAL HELP on your mill-modernization program, be sure to contact your G-E Apparatus Sales representative early in the planning stage. General Electric Company, Schenectady 5, N. Y. 654-36

Engineered Electrical Systems for Textile Mills

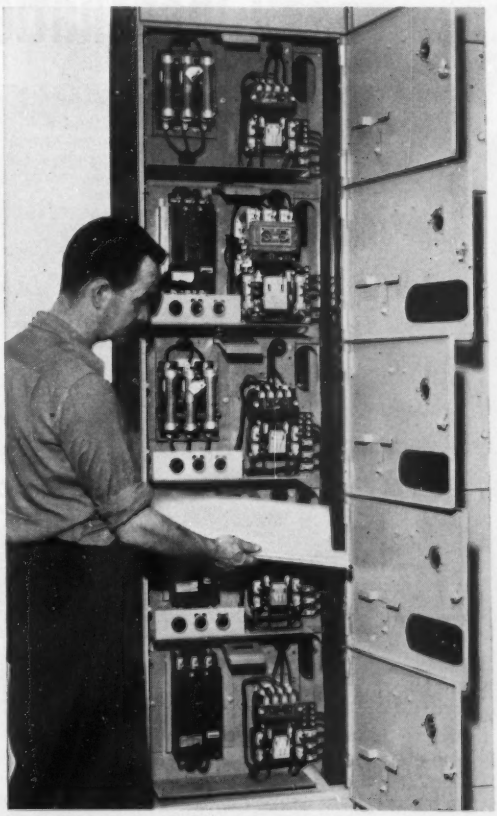
GENERAL ELECTRIC



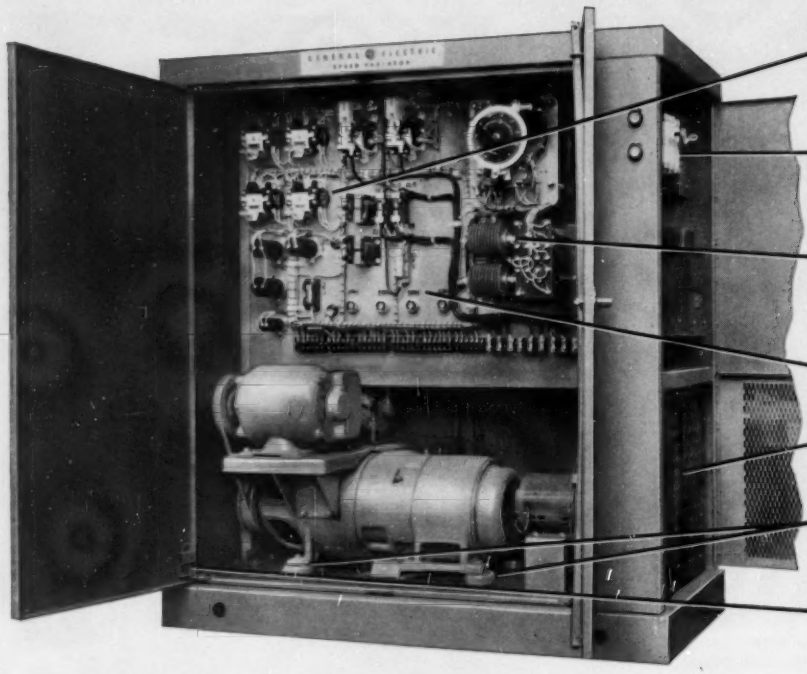
EASILY INSTALLED G-E load-center unit substations bring power close to the load for economical distribution. Co-ordinated units with modern air circuit breakers give maximum reliability, feeder protection.



BETTER PROTECTION AND CONTROL of incoming lines and feeders, motors, generators, are provided with G-E metal-clad switchgear. Magne-blast air circuit breakers assure highly dependable operation.



PRE-ENGINEERED G-E motor control center is factory-wired and assembled, easy to install and service. Interchangeable units are versatile, mechanically strong.



STANDARD CONTROL COMPONENTS are front-connected. Replacements readily available whenever needed.

MAGNETIC STARTING CONTROL and all a-c components protected in separate compartment.

COMPACT AMPLISTAT, easily replaced stock item with no moving parts, requires no maintenance.

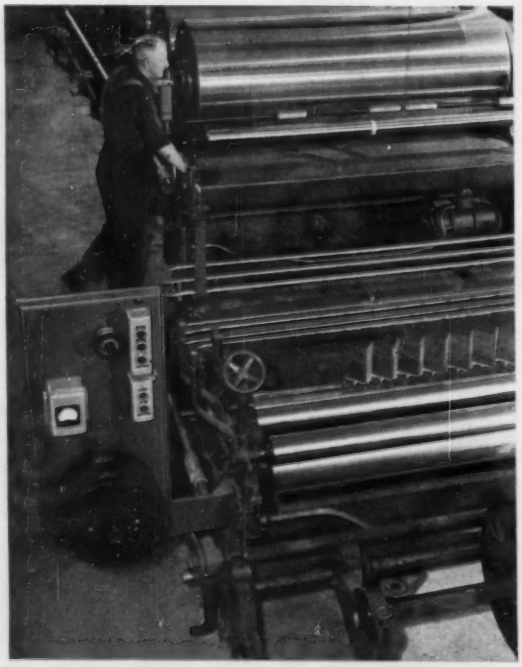
ALL DEVICES IDENTIFIED for quick recognition, easy servicing.

PRESSURIZING FAN AND AIR FILTER keep unit free from lint and dirt. Filters easily replaced.

VIBRATION DAMPERS supporting m-g set minimize vibration and reduce noise level.

HINGED, REMOVABLE DOORS for quick, easy accessibility.

NEW G-E packaged slasher drive gives you easy installation . . . less maintenance



NEW G-E SLASHER DRIVE maintains tension automatically, keeps elasticity uniform. On panel are speed and tension control rheostats, tension indicator, push-button station.

Winds up to 20% more yarn on the beam

LESS MAINTENANCE—Now, General Electric's slasher drive incorporates the amplistat, a static magnetic amplifier. With no moving parts, maintenance is cut to a minimum. To reduce downtime further, the positive-pressurized cabinet and inexpensive glass fiber filters help keep lint and dirt from power unit. Protected within case, all components are easily reached through hinged doors.

EASY TO INSTALL—Power unit comes assembled, wired and tested, and requires no special foundation. Just set unit in reasonably level position and run in conduit.

BETTER PERFORMANCE—By setting a simple dial, stepless adjustment of beaming tension can be made over a wide range to suit yarn sizes and number of ends. The G-E amplistat maintains settings automatically—makes possible up to 20% more uniformly hard-packed yarn on the beam.

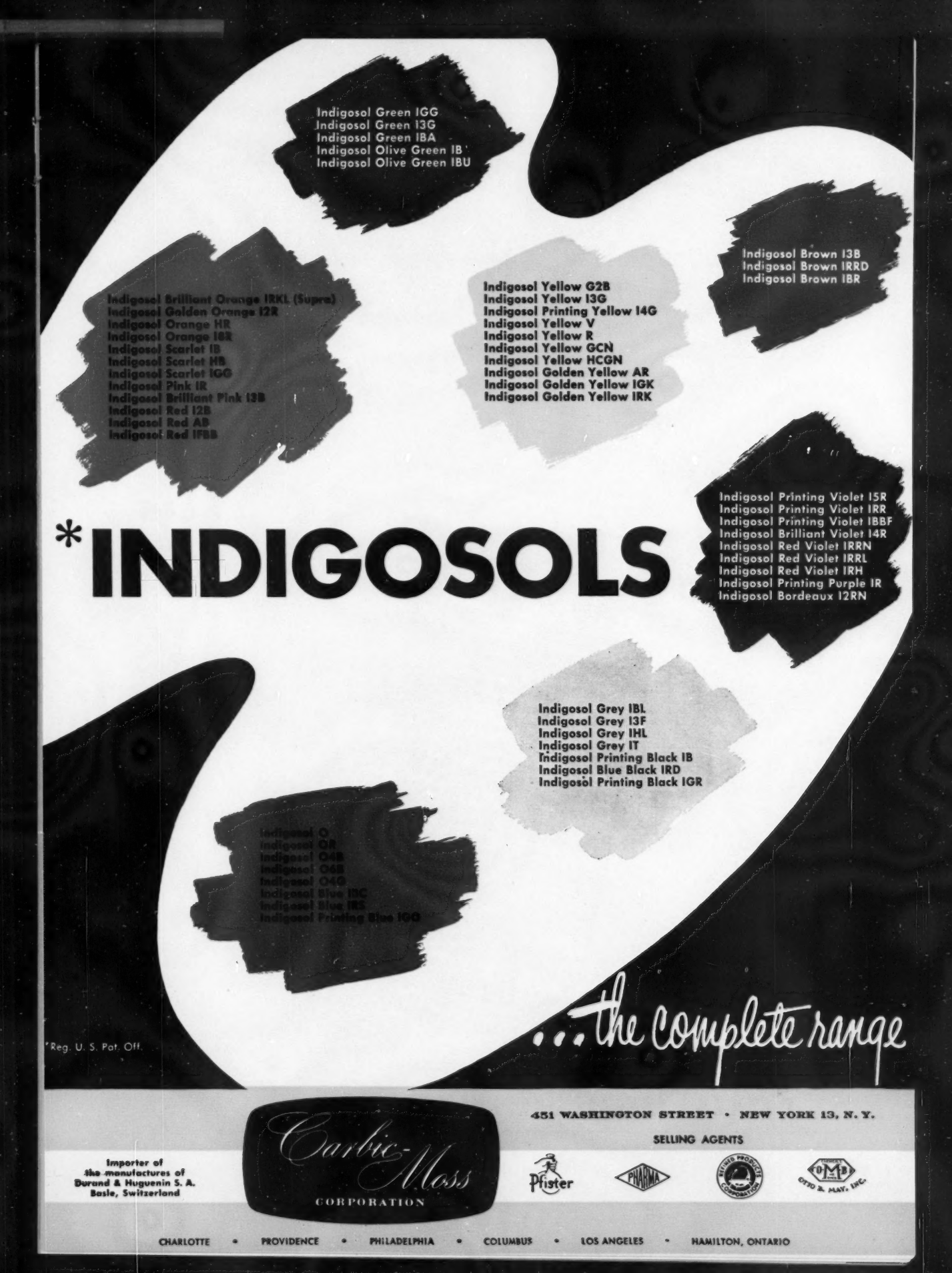
Included in General Electric's new packaged slasher drive are: (1) compact, factory-assembled power unit, (2) adjustable-speed d-c drive motors and (3) operator's controls which can be mounted in most convenient locations.

FOR MORE INFORMATION—Contact your G-E Apparatus Sales Office. A specialist will show you how to get the best from your slasher operation. Direct Current Motor and Generator Department, General Electric Co., Erie, Pa.

815-5

GENERAL ELECTRIC

Textile World.....July and Aug., 1955 Textile Industries....July and Aug., 1955 (815-5)



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control became merely a routine part-time task.

The control had, in effect, made every supervisor waste conscious of every waste classification in every department. With this control he was able to point out to various key employees any sharp deviations, which in turn meant that every employee was briefed on the waste problem connected with his work.

Wool Weaving

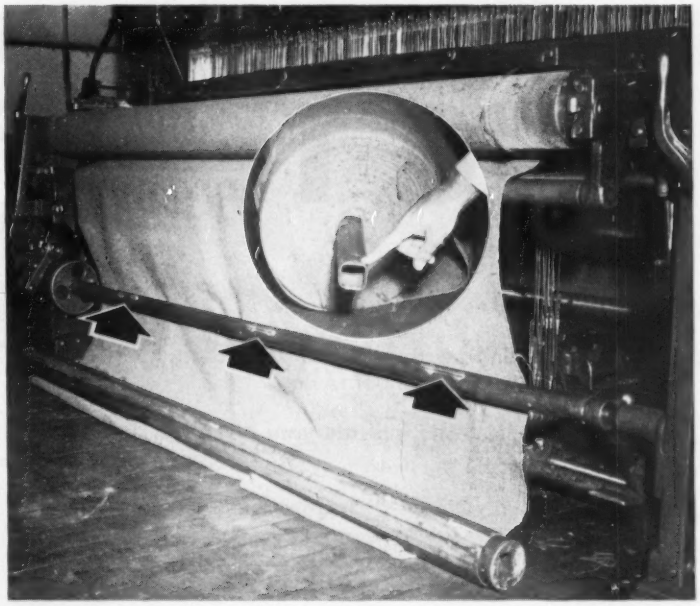
Canadian Mill Uses Common Pipe to Make Cloth Rolls

THE MILL-MADE rolls shown here were fashioned from common industrial pipe by J. A. Humphrey & Sons Ltd., Moncton, New Brunswick, Canada, for use on its W-3 looms. The entire job cost about $11 per roll.

The photograph shows one of the rolls in place on the loom at the start of a cut, in contrast to the commonly used hexagonal wooden roll shown on the floor.

The pipe is 1½″ stock which has been cut to loom size (89″ for a 92″ loom) and squared off at each end (see inset). To facilitate start-up of cloth on the roll, three 5″ lengths of ⅛″ rod have been welded to the roll (arrows). This presents a grabbing surface.

These rolls do not wear out, and can be thrown around without damage. The rolls can be painted for use with fine fabrics.—*Staff.*



Recommendations Affecting ASTM Standards

DURING the recent annual convention of the American Society for Testing Materials, Committee D-13 on Textile Materials recommended the following two methods for publication as information: (1) Proposed method of test for linear density of textile fibers by the Vibroscope; and (2) Proposed method for test of cotton content of asbestos textile materials (referee method).

Nine methods and specifications were recommended for publication as tentative: (1) Tests for warp knit fabrics; (2) Test for pilling propensity of textile fabrics; (3) Test for wide elastic fabrics; (4) Test for abrasion resistance of textile yarns; (5) Test for absorbency time and absorptive capacity of nonwoven fabrics; (6) Method for analysis of asbestos-glass fiber textile materials; (7) Test for maturity of cotton fibers (polarized light method) to replace the procedure in Methods D 414; (8) Specifications and methods of test for fineness of mohair tops; and (9) Test for fineness of cotton fibers by resistance to air flow (Arealometer method).

Revision of the following tentative methods and specifications was recommended: D472-53T fineness of wool tops; D419-50T fineness of wool; D885-53T rayon tire cord; D1116-50T resistance of pile floor coverings to insect pest damage; D1060-54T core sampling of raw wool in packages for determination of percentages of clean wool fiber present; and D1175-51T abrasion resistance of textile fabrics.

Tentative revisions were suggested for the following: D 418-42 Standard Method of Testing Pile Floor Coverings; D 462-53 Standard Methods of Testing and Tolerances for Certain Wool and Part Wool Fabrics; D 123-54 Standard Definitions of Terms Relating to Textile Materials.

The committee urged immediate adoption of the standard method of test for colorfastness to light (D 506-52).

Also, it was recommended that: (1) the method for length by fiber

only

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2. Stainless steel ball bearings minimize friction, resulting in uniform quality of roving.
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5. Better spinning of spun rayon.
6. Easier creeling; less physical effort and fewer motions required.
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8. Now cadmium plated and stainless steel balls more rust resistant.
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array in Sections 4 to 10 of Tentative General Methods of Testing Cotton Fibers (D 414-54T) be revised and issued as standard; and (2) Standard Method of Test for Fiber Length of Wool (D 519-49) be reverted to tentative and revised.

Let's Stop Those Accidents!

TEXTILE industry employees had fewer on-the-job accidents during 1954, but the ones they had were more serious, an analysis recently released by the National Safety Council indicates.

The average accident frequency rate for operatives in textile manufacturing plants submitting reports to the Council, based on the number of disabling injuries per 1,000,000 man-hours, was 4.71 in 1954—a reduction of 15 per cent from the year before. But the average accident severity rate, based on the number of days lost per 1,000 man-hours, was .54—an increase of 29 per cent over 1953.

On the other hand, rates for all industries reporting to the Council showed a reduction in both frequency and severity of 1954 accidents as compared with 1953. Twenty-eight of the 40 basic industry classifications reduced their frequency rates, and half of them reduced their severity rates.

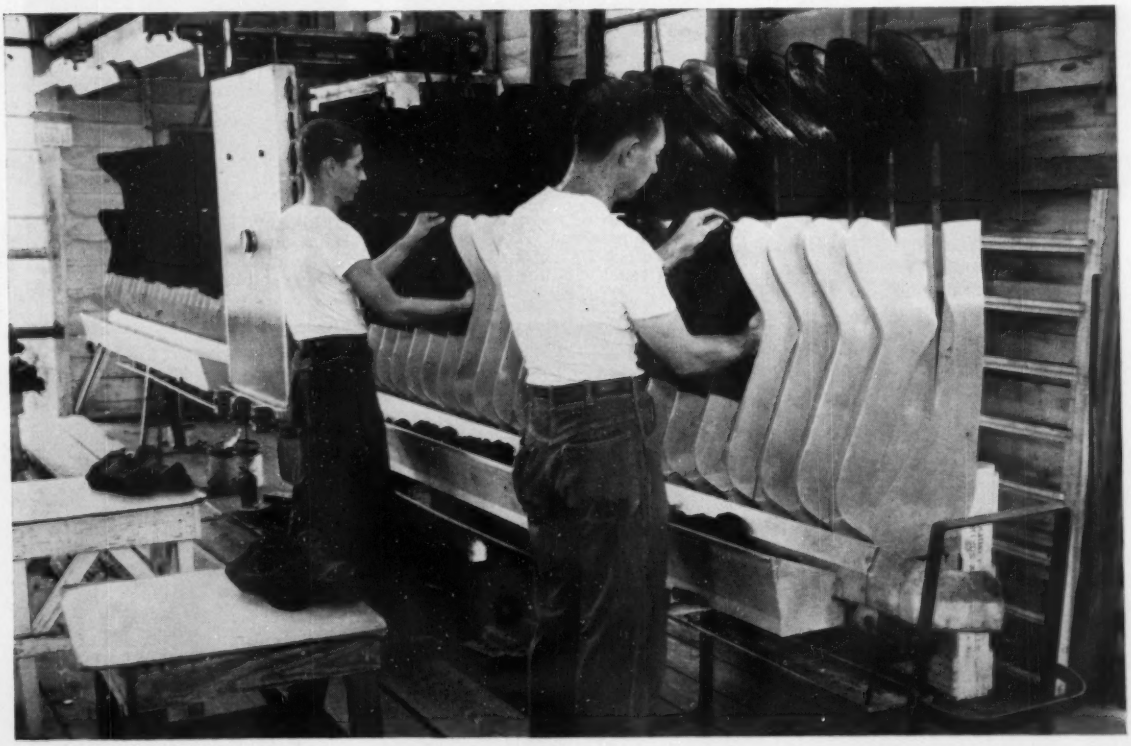
Knitting

Special Forms Double Production on Preboarder

STAFF PREPARED EXCLUSIVE

MAUNEY Hosiery Mills, Kings Mountain, N. C., installed new preboarding equipment several years ago, and since that time have made modifications in the equipment and processing procedures to increase production without sacrificing quality on nylon hosiery for men.

The Turbo machine was equipped with special boarding forms. These aluminum alloy forms accommodate two socks per stand instead of one (see accompanying illustration), thereby doubling finish boarding capacity and production. (*Continued p196*)



This Simplified Handling System Reduces Full-Fashioned

BY S. BENTON DAVIS

EXCLUSIVE

The materials handling and inventory control system used at this full-fashioned hosiery mill has reduced handling to a minimum throughout the whole process—stockings are touched only by the knitter, seamer, examiner, and preboarder. As a result, fewer handling pulls occur.

The "tray ticket" used with the system is a black-and-white record of the substandard work made by each knitter; it provides a basis for statistical quality control work; and is a valuable time saver during inventory taking.

ABOUT four years ago the operating management of a new mill being established decided to try to develop a materials handling and inventory control method which would begin at the knitting machine and carry through the examining operation. As basic objectives the following were established:

1. A minimum of handling of the actual merchandise, in order to reduce the quantity of handling pulls put in stockings during the knitting and finishing processes.

2. An inventory control plan which would make for easy identification of materials, so far as styles and quantities were concerned, at any step in the process.

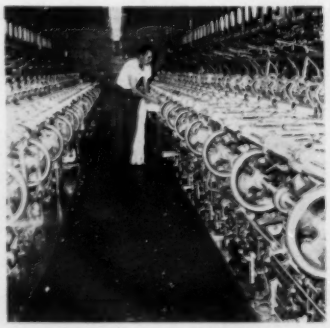
Preliminary Steps. After a search of available literature and conversations with a number of mill people, it was decided that the use of trays for transporting material should be a major consideration, and that mechanical examination such as that developed by Edward A. Ammon would assist with this program.

The methods used today, while following in general the original plan, have evolved through suggestions of supervision and operatives to a point where the original plan is hardly recognizable. However, the program, despite its metamorphosis, does attain its intended objectives of reducing handling pullers to a minimum and making work readily identifiable.

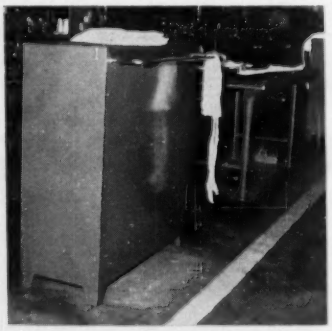
Recent studies made of work examined indicate that handling pullers are averaging less than three per cent. This, we believe, can still be improved; and we are continually searching for improved methods and processes which will help us to obtain a higher percentage of first quality work.

Proper Hand Care. Basic to the plan is adequate hand care by operators in all steps of the process. In order that this may be properly done, a hand inspection is made on a routine basis, and employees are provided with special hand cream. Special soaps are provided for wash rooms, and air dryers are used instead of paper towels. A combination of all these factors makes for a vast improvement in the hand condition of new operatives after they have been in the mill for a short time.

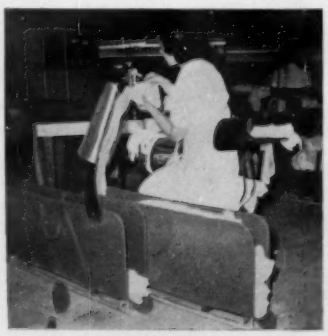
See Illustrations. Step 1 shows a knitter removing a finished set from the knitting machine. It will be noted that the knitter stoops slightly as he pulls the stocking off the machine with his right hand and drapes it over his left hand in such a way that the welt is near the arm. He takes care to hold this



STEP 1. Knitter removes finished set from machine. Arm is held away from body so that stocking will not touch clothing.



STEP 2. Work is taken to knitter's suede-covered table (foreground). Table in the background is for flat iron examining.



STEP 6. Work is taken from storage to seaming department as needed. Seaming tables have suede-covered trough to hold work.

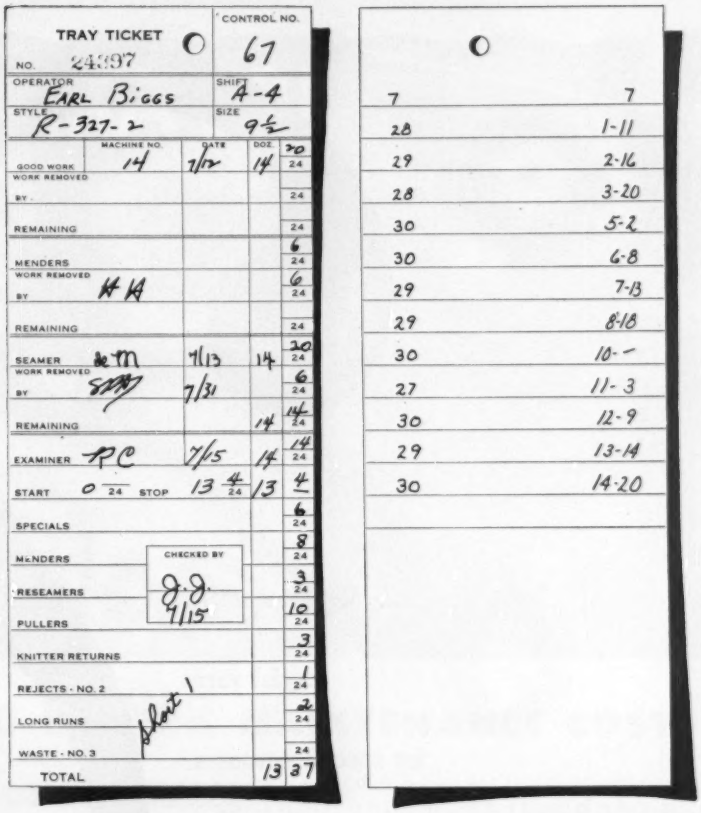
STEP 7. Work is examined on Ammon examining forms. Air blast carries stockings into suede cloth or wrap at operator's left.

Seconds

away from his body so that it does not touch his clothing.

This work is taken to the knitter's table, which is shown in Step 2. These tables are covered with a suede cloth and the stockings are laid on this cloth. Any menders which may have been in the set are hung on the rail.

Here the process departs from tradition in that the work is placed



TRAY TICKET NO. 24397 — CONTROL NO. 67

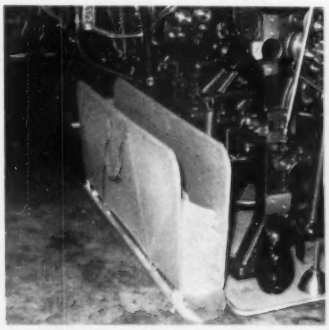
OPERATOR: EARL BIGGS — SHIFT: A-4

STYLE: R-327-2 — SIZE: 9½

	MACHINE NO.	DATE	DOZ.	
GOOD WORK	14	7/12	14	20/24
WORK REMOVED BY				24
REMAINING				24
MENDERS				6/24
WORK REMOVED BY	HA			6/24
REMAINING				24
SEAMER	M	7/13	14	20/24
WORK REMOVED BY		7/31		6/24
REMAINING			14	14/24
EXAMINER	RC	7/15	14	14/24
START 0 24 STOP		13 4/24	13	4/24
SPECIALS				6/24
MENDERS	CHECKED BY J.J. 7/15			8/24
RESEAMERS				3/24
PULLERS				10/24
KNITTER RETURNS				3/24
REJECTS - NO. 2				1/24
LONG RUNS	Short 1			2/24
WASTE - NO. 3				24
TOTAL			13	37

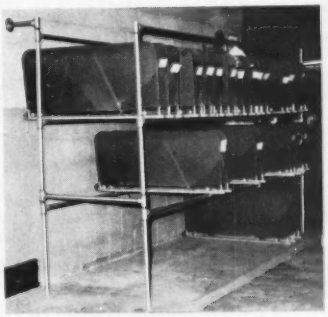
7	7
28	1-11
29	2-16
28	3-20
30	5-2
30	6-8
29	7-13
29	8-18
30	10--
27	11-3
30	12-9
29	13-14
30	14-20

TRAY TICKET is the basic record for the inventory control plan. Face of ticket (left) contains detailed history of sets of stockings in the tray. Knitter notes in left column of back of ticket (right) the number of good stockings contained in the set; in right column he prepares a summary of his production following each set.



STEP 3. Set is folded over and placed in tray directly behind machine. Set basis is used, rather than dozen basis.

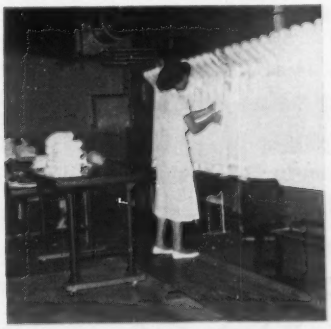
STEP 4. Following the shift change, trays are placed in rack for stitch setting. Knitter has filled in tray ticket.



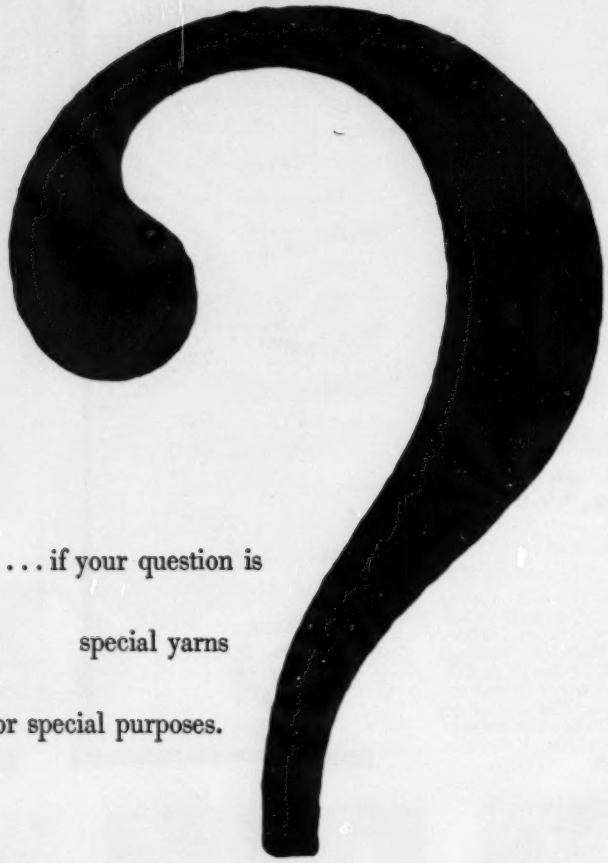
STEP 5. After stitch setting, the work is removed and put into storage. Production control clerk has removed menders.

STEP 8. Close-up of wrap at examining form. Odds go to classification racks (background), until standard-size lot accumulates.

STEP 9. Stockings are stored in wraps before preboarding. Trays hold sample lots which are to go to quality control department.



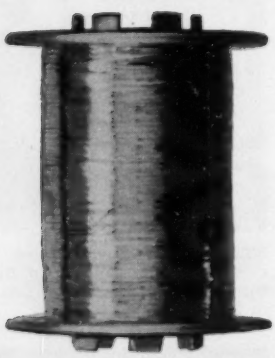
STEP 10. In preboarding, wraps are placed untied in trough in front of the two sides of the Turbo preboarder, for easy access.



. . . if your question is

special yarns

for special purposes.



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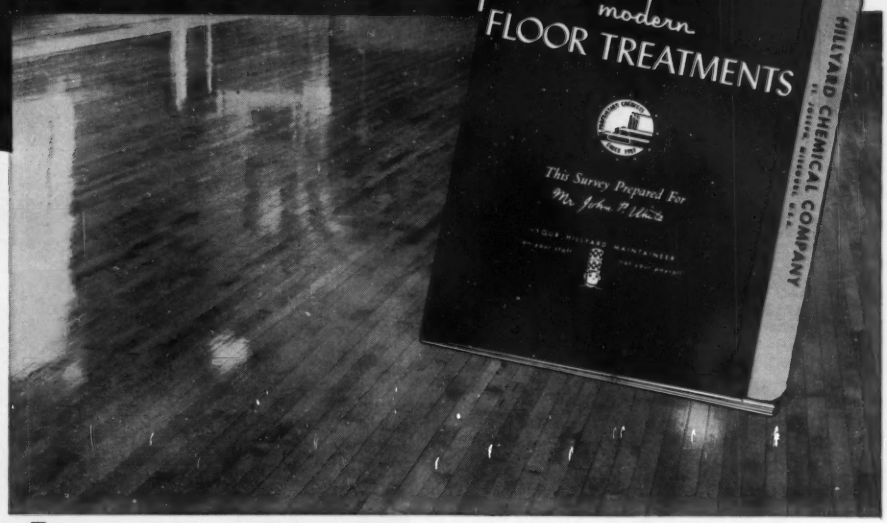

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- "This gym floor stood up 14 years without removing finish or re-sanding" — College in Texas
- "Hillyard meets the test of providing our plants with the best-looking floors, the most durable finish, and at the lowest cost" — World-famous bottler, New York State
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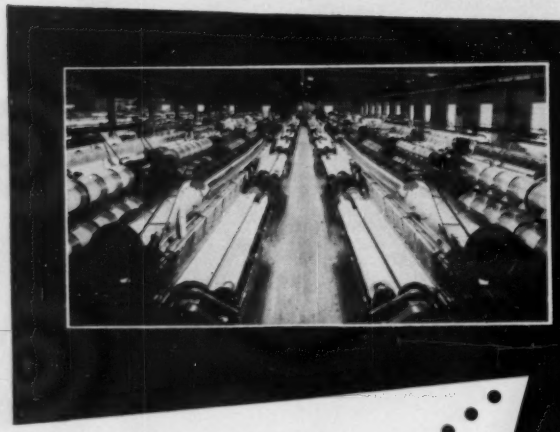

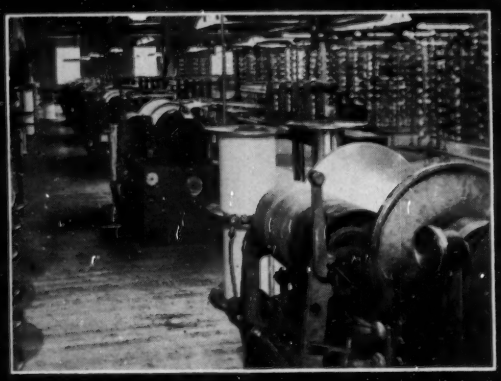

Tricot at its best!

Reiner Tricot Machines and Warpers can be depended on for Consistent, High Speed, Top Quality Yield!

In mills all over the world, Reiner machines have an enviable reputation as producers of *Tricot at its Best!* Day in and day out, they provide flawless production in steady, 'round the clock, trouble-free operation.

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Take Bus Nos. 61 or 67, from Platform No. 60, Port Authority Bus Terminal, 41st Street and 8th Avenue, New York City. Get off at Pleasant Avenue, Weehawken, New Jersey. From there turn left and walk through the underpass up to Gregory Avenue . . . TELEPHONE: UNION 7-0502, 0503, 0504, and 0505. From New York City call LONGACRE 4-6882.

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in the tray on a set basis rather than a dozen basis. This also is the first step in our inventory control plan, the basic record for which is the tray ticket shown [at the top of page 169]. More about this will be told later, but on the reverse of this ticket the knitter notes in the left column the number of good stockings contained in the set.

The set is folded over and placed in the knitting tray located directly behind the machine, as shown in Step 3. Attention should be called to the work on the table in the background of picture No. 2, which has been placed there for flat iron examining. Any defects found in this work are immediately called to the attention of the fixer, who takes this work back to the knitter for consultation.

Each set is removed from the knitting machine and is treated as described above. In the right column on the reverse of the tray ticket the knitter prepares a summary of his production following each set so that at any time he knows what his production for the day to that hour is.

After the work is completed and all sets have been folded and placed in the tray (these are placed in the tray with the folded edge alternating in order to prevent bunching up) the knitter gathers his menders, ties them with a distinctly colored string, and places them on top of the tray with the work in the opposite direction from his good work. Thus the string and the direction of the menders indicate that they are not to be considered as first quality work.

The Tray Ticket. The knitter fills out the face of the tray ticket, which contains information regarding the knitter's name, shift, style he is working on, and the size. He also then puts in the amount of good work which he made for the day and in the proper column, under dozens and twenty-fourths, inserts the number of menders which he has made.

In the upper right hand corner of the tray ticket the control number of work produced for that day is inserted. This control number represents the construction of the stocking from the standpoint of yarn lots, style, construction changes, etc. This is very important not only from an identification standpoint but also from an inventory control standpoint. The numbers are consecutive and will not repeat at any time.

At the same time, a register is maintained which gives the complete information regarding the control, showing the style, welt lot number, body lot, heel lot, toe lot, date first knit, and date last knit after the control is completed. In addition there is a point for comments which normally is used to give the identifying color of tickets which are employed later in the process to identify the work.

Stitch Setting. Following the shift change the trays are gathered and placed in a rack for stitch setting. This step in the process is shown in Step 4.

After stitch setting, the work is removed and put into storage, awaiting seaming. Step 5 shows such work in storage.

It is to be noted that at no time has the work been touched by hand, except that the production control clerk who removed the work from the stitch setter at the same time removed the menders from the tray. These menders are accumulated until sufficient dozens of a control number are available for mending.

Seaming. Work as needed is removed from storage and taken to the seaming department. The seamer is provided with two trays —one for seamed work and the other containing the work to be seamed.

Individual seaming tables are used, and each table has a suede-covered trough to hold work to be seamed. This can be seen in Step 6.

A chute from the machine guides the seamed work into the tray, and when the chain is cut at the end of the seaming cycle the welt is carried into the tray by the operator.

Following the seaming step, work again goes into temporary storage pending examination.

Examining and Preboarding. As needed, work is removed from storage for the examiners, who operate Ammon examining forms. Under this plan, work is removed from the tray, put on the expanding form, and is then carried from the form by air-blast and pusher movements into a suede cloth or wrap. This wrap is shown in Step 7, to the left of the operator.

Wraps are made up into 10-dozen lots and transported to the preboarding department where they are put in temporary storage awaiting preboarding, as shown in Step 9. Picture No. 8 gives a much better view of the work being carried into the wrap following the examination.

At each of the last two steps, the operator has inserted in her section of the tray ticket her name and the date, together with the quantity handled. In the example, the seamer seamed 14 dozen and 20 stockings. Six stockings were then removed, leaving a total of 14 dozen and 14 stockings in the tray. These she examined, finding 13 dozen and 4 stockings which were first quality.

When the examiner finds a substandard stocking, it is thrown on top of the table, where it is classified as a special, mender, reseamer, etc.

After completion of a tray, the stockings are placed in a strap, which has separate compartments for each of the segregations, and this strap is then removed by a production control clerk. The clerk counts the work in the strap and the quantities are inserted on the tray ticket.

The odds themselves then go to classification racks, where they are held pending the accumulation of sufficient numbers to make up either a tray of menders or dozens which can be put into process. These classification racks are shown in the background of pictures 7 and 8. Step 9, as mentioned, shows the examined work in temporary storage for preboarding. This work is stored in wraps and a few trays—trays are used for sample lots which are to go through the quality control department; otherwise work is always stored in wraps.

Step 10 shows the preboarding operation. Wraps are removed from temporary storage and placed in the trough in front of the two

sides of the Turbo preboarder. It will be noted that the stockings are not removed from the wrap; but the wrap is placed in the trough untied and the edges of the wrap pulled over the trough so that the work can be reached by the preboarding operator.

Following the preboarding, the work is folded and placed in dye nets for transportation to the dyeing operation.

Results. It is interesting to note that in the entire process the stockings are touched by only four people—the knitter, the seamer, examiner, and the preboarder. At all points of transportation there is no contamination of the stocking by the individual doing the transporting. This plan as now used has attempted to reduce handling to an absolute minimum.

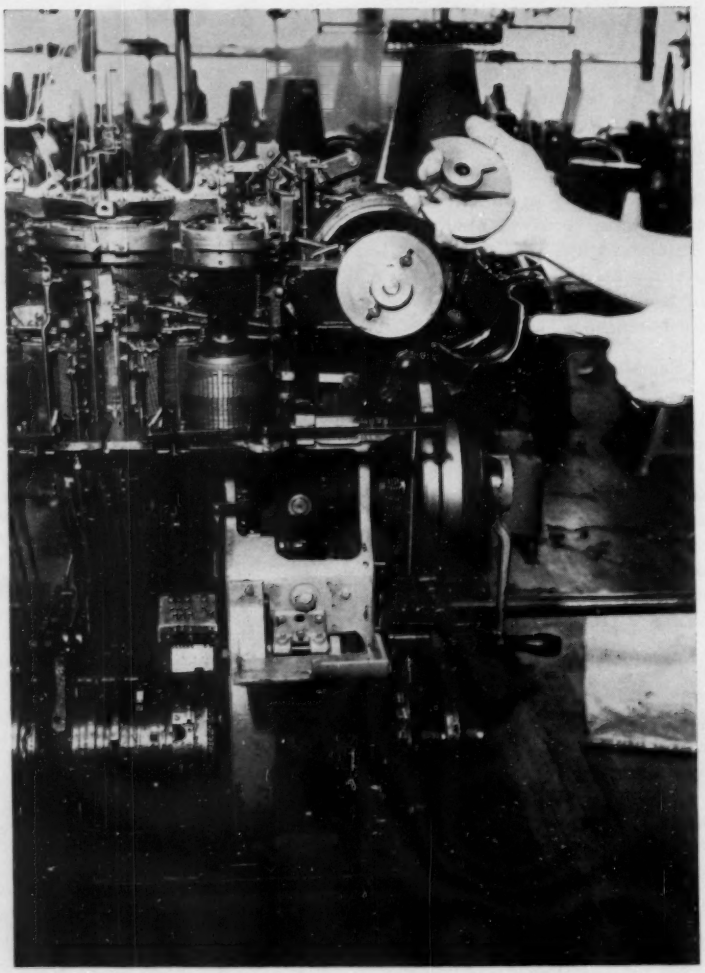
The tray ticket itself provides a very valuable tool for use especially with trainees. These tickets

It Pays to Give Seamless

BY C. C. AUTON

EXCLUSIVE

THE FIRST few hours after a new seamless knitting machine is received at the mill without a doubt are more important in determining the span of its useful life than any similar period after it begins operation. The way the machine is set up and started may well determine whether operation is smooth and continuous or whether the machine frequently causes trouble and has to be shut down a great deal of the time. The difference between first quality production and substandard production may be determined by the way the machine is started or broken in.



Starting right begins when the new machine is unloaded from the truck or freight car. Don't sign for a machine until examination reveals that the crated machine has not been damaged during shipment. Machinery overturned in shipment may be damaged and completely useless for production. It is important that the machine has remained upright during the entire shipment and has not been overturned or jolted excessively.

The next thing to check before signing for the shipment is to see that all the assemblies and subassemblies which are supposed to be sent with the machine are there, along with any spare parts which are supposed to be included. Some of these may have fallen out of the crate, and it would be very embarrassing to set up a machine and find that the chain or yarn spider was missing.

When you are sure the machine is all there and undamaged, you have started right with the new machine.

Caution. If it is the policy at your plant for office personnel to sign for shipments received, it is worthwhile to have the head fixer

←

PARTS DAMAGED IN SHIPMENT may be costly to replace. Don't sign for a machine until condition of all parts has been checked by competent personnel.

can be returned to the knitting department so that the fixers and instructors can go over the substandard classification work with the maker of that work, pointing out to him the problems which he has created by turning in work which is not of the highest quality.

In addition, the ticket provides a basis for statistical quality control, since an analysis of the various substandard classifications will indicate where attention is needed in order to improve work going through the mill.

This ticket also is a valuable time saver during inventory taking, since the trays in process containing this ticket give at all times a complete picture of what is in the tray.

As stated in an early paragraph, this process is continually evolving —this description gives it as of now; it's anybody's guess what it will be like a year or two from now.

Machines the Right Start

or some other responsible mechanic inspect all new knitting machines before anyone signs for them.

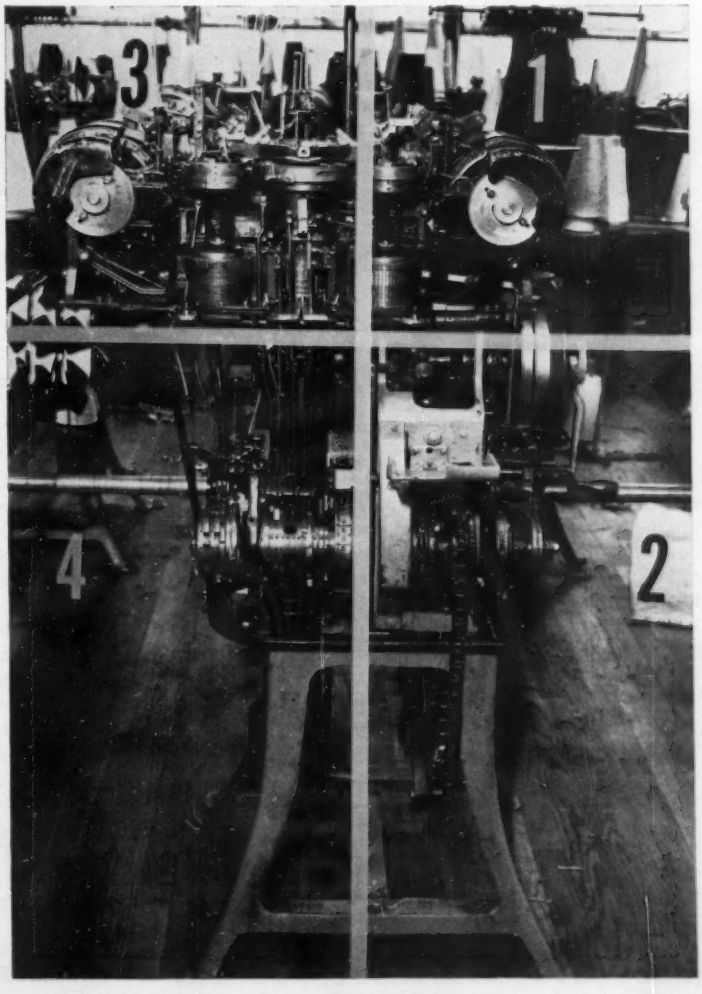
After the machine has been carefully uncrated, place the assemblies (which were not attached to the machine) onto the machine in their proper place and secure them firmly.

Procedure to Tighten. Go over the entire machine and tighten all nuts, bolts, and screws that are not to provide adjustments. This is very important. A good method to follow in doing this so that none of the nuts, bolts, or screws is overlooked is to divide the machine into four sections. These sections can be determined in relation to the bottom of the knitting cylinder and may be the upper right, lower right, upper left, and lower left.

Tighten all of the bolts in the upper right section, and follow through in all the other sections. Repeat the cycle by firmly securing the nuts, then the slotted screws, the Allen screws, and the Phillips screws. When this operation is finished, you can rest assured that the machine is tight, and there is little likelihood that parts or pieces will come loose.

Many fixers do not take the time to go over a machine and tighten it completely before "running in." Machines which are not tightened are the ones which cause the most frequent trouble. A little time at the start is well spent in tightening a machine thoroughly.

Chain Assembly. A good idea before running the chain is to gauge all the chain lugs with a link gauge. Links vary in size, and a little time spent with a link gauge can be well worth the ef-



FOUR EASILY EXAMINED SECTIONS provide systematic procedure for seeking loose nuts, bolts, and screws. Check bolts first, then nuts, slotted screws, Allen screws, and Phillips screws.

YOU FURNISH THE PRINT, WE'LL FURNISH THE PART

TEXTILE BOBBINS OF SYNTHANE LAMINATED PLASTIC ARE KIND TO DELICATE SYNTHETIC YARNS

In the textile industry *Synthane* laminated plastic has many uses because it supplies many properties in combination. Take this bobbin, for example. It has to be hard, smooth, non-snagging, light in weight, dimensionally stable, and tough. Made from *Synthane*, it has all of these advantages.

Synthane is hard and finishes to a super-smoothness that doesn't snag fine yarns. Because *Synthane* is light in weight, the bobbin has low inertia—starts and stops easily—cuts down wear and maintenance. And because *Synthane* is chemically-resistant it is of value in dyeing and finishing processes.

Synthane bobbins are also mechanically strong; highly resistant to breakage. So you can see why they are widely used throughout the textile industry. Other uses for *Synthane* include hosiery turning and examining forms, non-snagging redraw caps, textile rollers, headless package tubes, and precision-built pirns.

Have you a part that requires *Synthane?* Then why not mail the coupon for the *Synthane* catalog; it tells the whole story of the many grades of *Synthane* sheets, rods, tubes, moldings and completely fabricated parts.

SYNTHANE CORPORATION, 9 River Road, Oaks, Pa.

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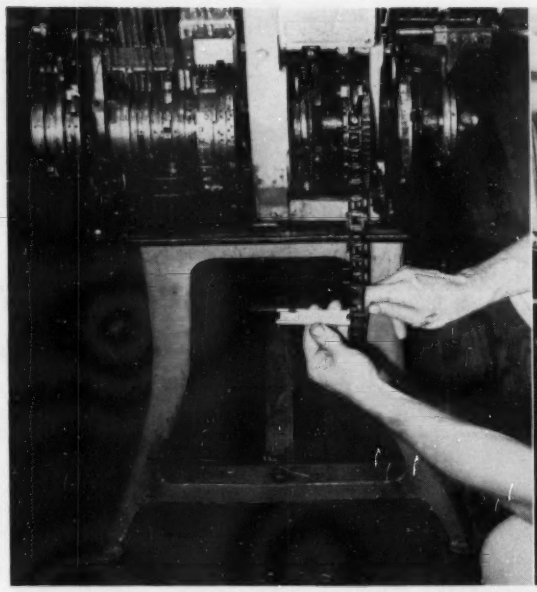
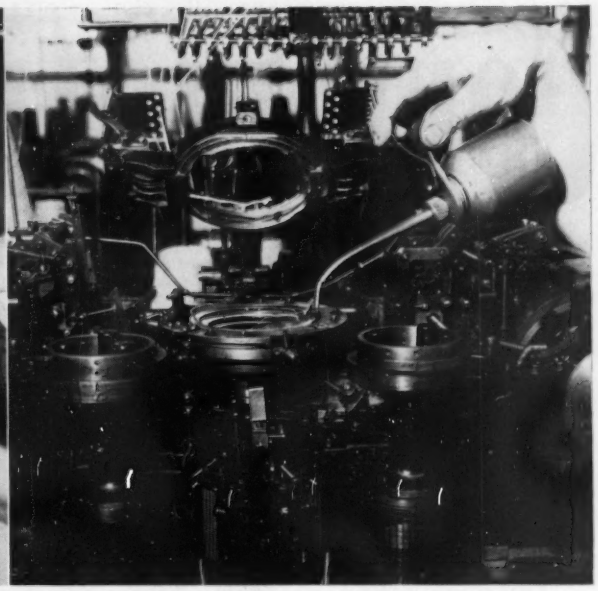


CHECK ALL CHAIN LUGS with a link gauge before running. Links vary in size and may be off enough to cause occasional malfunction.



OIL FREELY, not only for lubrication but also to flush away any milling dust or filings left in or around the bearing surfaces.

fort.

Links may be off just enough to cause a malfunction once in a while; perhaps only once in two or three weeks. This infrequent trouble may cause the fixer to think that something just naturally went wrong. Then six or eight months later when a link gauge is used on the chain, the trouble is finally found. Such troubles can be eliminated by using a gauge to check the machine in the beginning and before the first start is made.

Clearances. Before the machine is turned, see that all clearances are correct. Cams must not touch the cylinder, picks and droppers must not ride the cylinder, all of the selectors must clear the cylinder, and all gears should be correctly meshed.

Establish a plain circular knitting portion on the chain, and run the machine with the chain idled for fifteen minutes without any yarn or oil. This will set the machine and warm all the bearing surfaces so that lubricants will flow freely over them. When the bearing surfaces have had time to warm slightly, start oiling the machine with the correct grade of lubricant.

Oil Freely. Oil the machine freely, not only for lubrication but also to flush away any milling dust or filings which may still be in or around the bearing surfaces. Run the machine for several hours this way, oiling frequently and generously. When the machine has become thoroughly loosened, it is time to stop. Then wipe away the excess oil, and thread the machine to make a sock.

First Sock. Remember, while making the first sock, turn the machine by hand through all movements of the main drum. This procedure helps to determine whether the main and chain pawls are set for the correct throw. When the machine starts the top of the sock, be sure that the elastic finger has not slipped during shipment and that it does not rub the needles or sinkers excessively.

If the elastic finger does rub needles or sinkers, an adjustment is necessary. The fingers will bend or break latches if they rub the needles, and sinkers may be burred by the same condition. Either condition will produce bad fabric.

Functional Check. Look for irregularities on each of the following items as the machine functions:

Yarn feed fingers:

(1) Look for throat plate clearance too close.

(2) Fingers not falling freely.

(3) Incorrect linkage connection or finger threaded incorrectly.

Tension Take-Up:

(1) Look for rough or cracked porcelain eyes.

(2) Wires bent out of position.

(3) Tight collars and rough pivot surfaces.

(4) Incorrect spring tension.

Clutch:

(1) Look for clutch cams advancing too fast or too slowly.

(2) Clutch cams incorrectly adjusted, slipped, or rough.

(3) Clutch not aligned into key slot.

(4) Clutch lever loose, bent, or incorrectly adjusted on clutch lever stud.

Pattern Cycle:

(1) Look for pattern disk drums advancing too far or not far enough.

(2) Pattern disk not level with selectors or selector bell cranks.

(3) Failure to double rack or over-racking at wrong time.

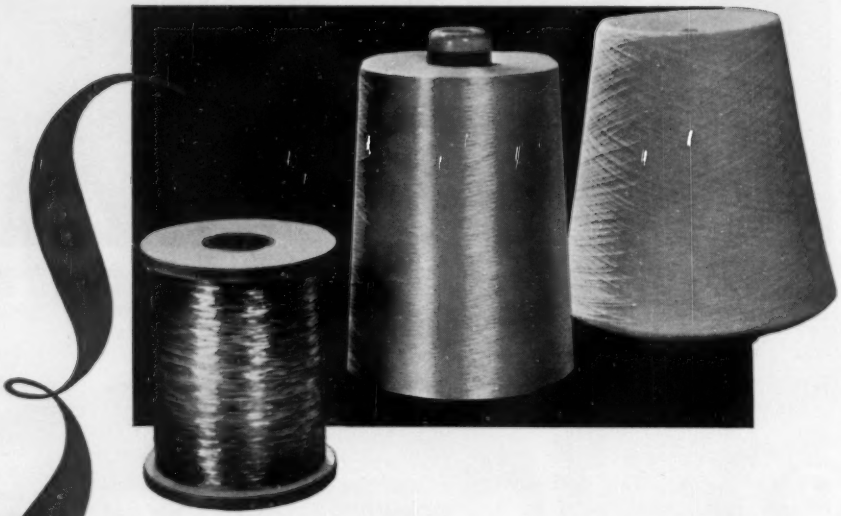
(4) Failure to idle correctly.

(5) Proper synchronization of

Combination Yarns

Strong • Pliable • Easy-to-Work

Any combination of these metallic, synthetic and natural yarns



Branson Combined Metallic Yarns

Non-tarnishing, highly color-fast and heat resistant metallic yarn combined with natural fibers or synthetic yarns. Wide range of metallic colors and widths.

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Synthetic yarns such as Dacron, Nylon, Acetates, Acrylics and other man-made fibers combined with natural yarns.

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Highest quality elastic yarns for hosiery, weaving and other trades for the past 18 years.

Made to your order

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Branson Combined Yarns are custom-made to your specifications. These strong, pliable, easy-to-work yarns are expertly manufactured by highly skilled technicians of many years experience and are guaranteed to run smoothly on your machines.

Tell us your requirements... let us work out the details with you.

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all pattern assemblies.

Indexing (on index machines):

(1) Look for correct alignment of cylinder at start of sock and clutch alignment into key slot.

(2) Raise or wing cam set to raise all needles to correct level.

(3) Cylinder reciprocation as determined by correct gear mesh, or connecting link adjustment.

(4) Indexing cams set for correct timing, and wing cams set correctly and tightly.

Correct Starting Position (especially V.I.P. machines):

(1) Determine correct idle position of the 96-move drum, chain, main or pattern drum, clutch wheel, pattern disk drum, color change drum, binder, and all ratchet stops.

If all of the foregoing assemblies are tight, and if they are correctly set to function, the machine is ready for a good start. However, when the machine is started, if there is a scratching, grinding, or chattering noise, find the cause immediately, and correct the trouble. Don't think that the machine will correct itself by prolonged running. It is true that the noise may eventually stop, but usually this indicates that a groove is worn around the knitting cylinder, a bearing is pitted, or some other costly damage is done.

Commission Wool Combing

Center Control at Backwasher and Sample at Dryer Every Hour

STAFF INTERVIEW

EXCLUSIVE

THE role of the commission wool comber is a unique one. His end product must always be in control even though it is an intermediate product in considering the whole picture of worsted yarn or cloth manufacture.

This is not always the case in an integrated mill; it can make up for such factors as oil variation in subsequent operations.

The commission top maker sells combed top. He is judged and paid for that product only—and that product must be exact.

Much of the control for the commission wool comber centers at the backwashing operation. Based on the experience of the Wool Combing Corporation of Canada Ltd., Acton, Ontario, there are three important points to watch:

1. Residual grease content after backwashing must be one-half of one per cent.

2. Three per cent of oil must be applied at the backwasher.

3. Tops must be cleaned white and kept that way.

Grease Content. All controls are based on old-fashioned attention to the details by supervision. To keep one-half of one per cent of grease in the backwashed tops at a constant, samples are taken from the dryer every hour, they are checked for grease content, and the scouring formula is adjusted if required.

Oil. Wool Combing Corp. applies three per cent of oil only (no emulsion) to the tops after drying, by the finger method. This percentage is held to within ± .05% by periodic testing and adjustment of the oil spray. This is a key point to watch when producing a finished product. If too little oil is applied, customers feel as if they are being shorted; if too much is applied, the tops become sticky and unworkable.

Cleanliness. Although backwashing is designed to remove processing dirt and impurities too tightly held in the stock to be removed by previous mechanical processing, special care must be taken to produce a white product. Important in this connection is the requirement to guard against picking up dirt in shipment from such sources as punctured packings.

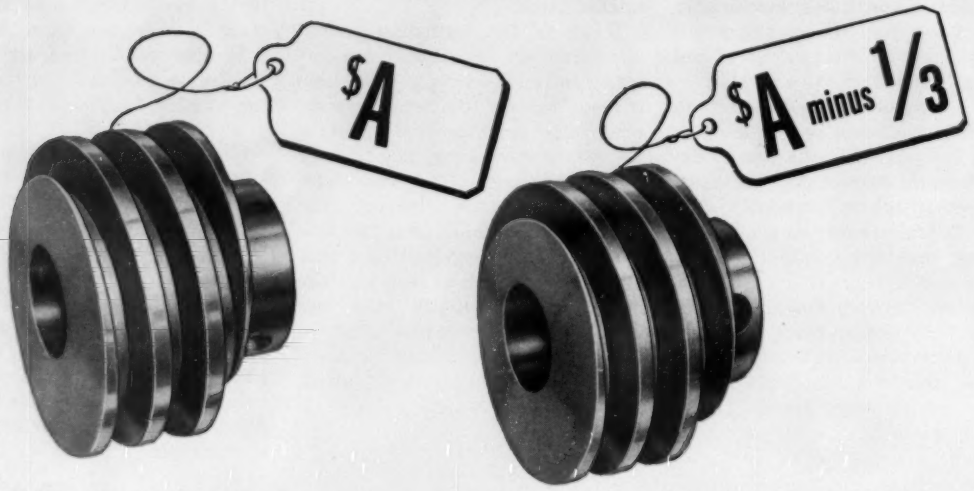
Coffee Cans and Rice Aid Stretch Hose Knitting

One-pound coffee cans partially filled with rice are credited with reducing seconds in one circular knitting mill making hose from stretch yarns.

Cones of stretch yarn are placed in the tins on the knitting machine yarn stands to help control ballooning and also to prevent tangles sometimes caused by loops of yarn accumulating at the base of the cone.

Pushing the cone slightly down into the rice prevents loops from falling underneath the cone.

A TRUE STORY—NO. 2 OF A SERIES



Which is the best money value?

Don't be fooled by the appearance of these two gears—the price tag on the right reads one third less but the gear is actually more expensive. The gears look alike, are both sold as a replacement for a Saco-Lowell card flat worm drive gear, but there the similarity stops.

The gear on the right, selling for less, is an inferior imitation of the original. It looks the same—even has discoloration marks normally associated with a hardened metal surface. Factually, this gear checked on a Rockwell Hardness Tester a rating of C20, the same hardness as ordinary cold rolled steel.

On the left is the Genuine Saco-Lowell Repair Part. The Rockwell Hardness Tester shows a hardness of between C59 and C60—truly a hardened gear.

Operationally, the Saco-Lowell gear will give longer life, outwearing the unhardened gear many times.

TRUE COSTS, measured in terms of gear life plus gear operation, certainly point out that the Saco-Lowell gear is by far the best "Money Value". While the initial cost is higher, you spend "A LITTLE MORE MONEY FOR A LOT MORE GEAR". Here again is PROOF that "IT PAYS TO USE GENUINE SACO-LOWELL REPAIR PARTS".

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60 BATTERYMARCH STREET, BOSTON 10, MASS.
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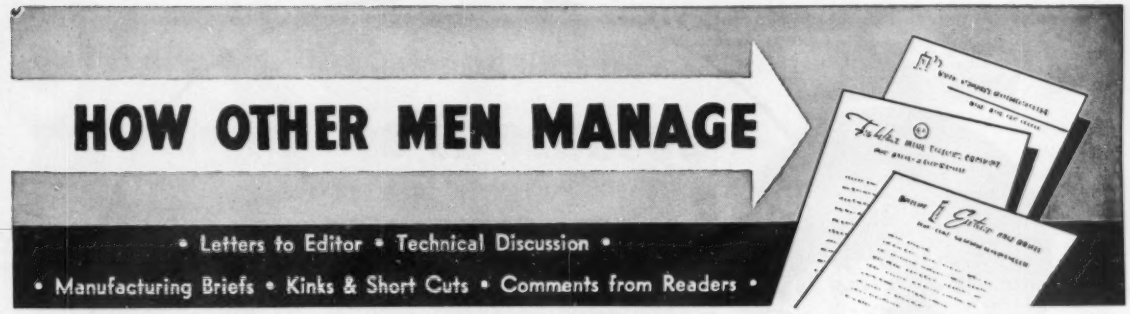

HOW OTHER MEN MANAGE
• Letters to Editor • Technical Discussion •
• Manufacturing Briefs • Kinks & Short Cuts • Comments from Readers •

You Can Make Old Spinning Frame Creels Look Like New Ones

EDITOR TEXTILE INDUSTRIES:

We had some badly worn and splintered creel boards on the spinning frames where we run 0.60- and 0.90-hank roving on 12-inch bobbins. Here's how we made them look like new.

First, we took out the bottom boards, turned them over, and took off the bottom strips. We plugged up the holes that had been drilled in them for the bolts that support the underframe cleaners, and any splintered places were filled in with plastic wood.

After sanding to a good smooth surface, we put on two coats of clear varnish, sanding after each coat, and finally a coat of good enamel.

Next, we laid off the board for the porcelain seats, drilled, and drove the seats into place. We reused the old porcelain seats wherever possible.

Since our frames have both overhead and underframe cleaners, the job of removing the creel boards was a little more difficult than it would be on frames without them.

We took the underframe cleaners off, laid them on the tapes, and then let the track rest on the tapes. We measured and drilled new holes for hanging the track before putting the boards back in the frame.

To avoid having to move the overhead cleaner track, we started at the head end of the frame, took the nuts off the creel rods, and then loosened the handle bars, working them upward through the creel brackets, about six inches above the creel board. We worked on one section at a time, and put the rods back in place before starting on the next section.

We used an extra frame of boards, to minimize loss of production while the creel boards were being refinished. One man fixes a frame in about eight hours, and it takes two men about an hour and a half to change a frame of boards. CONTRIBUTOR No. 8807

NEW KINK CONTEST!

$100 will be awarded the winner

Send your entry now! This contest ends December 15, 1955

Every kink, short-cut, time-saver, or quality improvement suggestion entered in the contest will be paid for immediately upon acceptance. The $100 award will be made as soon as all entries are judged.

The contest rules are simple:

► All contributions must be postmarked not later than midnight, December 15, 1955.

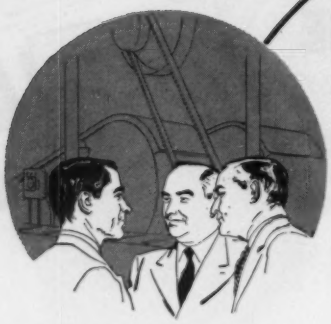
► No limit to the number of entries an individual may submit in any one contest.

► All entries paid for upon acceptance — no waiting. Extra payment for photographs that are usable. Extra consideration is also given kinks accompanied by legible pencil sketches or drawings.

► Entries must not have been published previously and must not be submitted to any other publication.

Send your contest entry to:

Editor TEXTILE INDUSTRIES, 806 Peachtree St., N. E., Atlanta 5, Georgia.



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always uniform . . .
and backed
by Keever service

VICTOR Mill Starch

A KEESTAR PRODUCT

is the weaver's friend

THE KEEVER STARCH CO. ★ GENERAL OFFICES ★ COLUMBUS 15, OHIO

Processors of corn, wheat and blended starches for industry since 1898

Charles C. Switzer, Vice President
TEXTILE SALES DIVISION
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Having Trouble Keeping Up with Warp Friction Let-Off Covers?

EDITOR TEXTILE INDUSTRIES:

When first we started our XD Draper looms, I had a difficult time keeping the covers on the warp friction let-off. The covers were often left on the floor, got shoved under the looms, and had to be hunted to find them when needed.

I attached the covers to the looms permanently by taking an inch wide strip of leather, cutting a slot in this strip, and threading it through the cover as shown in the accompanying illustration. The other end of the leather was attached through the whip roll arm with a cotter pin and washer. These covers have been on the looms for two years now.

Although this is a simple kink, the foreman has been spared a lot of aggravation.

CONTRIBUTOR No. 8656

Wool Mill Doff Box Is Easily Repaired

This mill-made doffing box for woolen spinning frames is built entirely of wooden slats held in place by four long bolts. This construction permits easy replacement of broken slats by removing the vertically placed bolt and adding a new slat, and allows for the box to be tightened up when repeated exposure in the steam box makes it loose. The unit was developed by J. A. Humphrey & Sons Ltd., Moncton, New Brunswick, Canada, for its own use.—*Staff.*

HOW OTHER MEN MANAGE

Here's One Way to Evaluate Parachute Cord Strength

EDITOR TEXTILE INDUSTRIES:

Because the life of an airman in an emergency depends on the strength of the cords of his parachute, there is a heavy responsibility on the shoulders of the manufacturer of parachute cord to keep the strength at standard or above.

To maintain a closer watch on the individual strengths, the superintendent of a certain textile plant which had a good-sized order for parachute cord decided to have the strength results tabulated in a frequency distribution.

This is one of the simpler phases of statistical quality control, easy to apply, and easier to analyze.

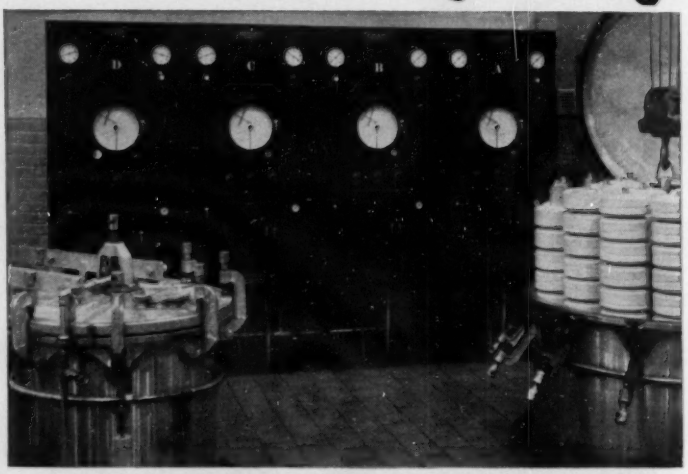
Now, parachute cords are constructed with an outside sleeve or tube, and a filler or core of a number of plied ends. To get the full benefit of the strength of the finished product it is absolutely requisite that both the sleeve and core break simultaneously at the moment of rupture.

Therefore, everything in the manufacturing of the yarns for the sleeve, of the filler for the core, and in the braiding process itself, must click. Otherwise, a considerable reduction in strength may result in the parachute cord. The desire of the superintendent to personally keep tabs on the individual strengths is, therefore, quite understandable, since strength is of such paramount importance.

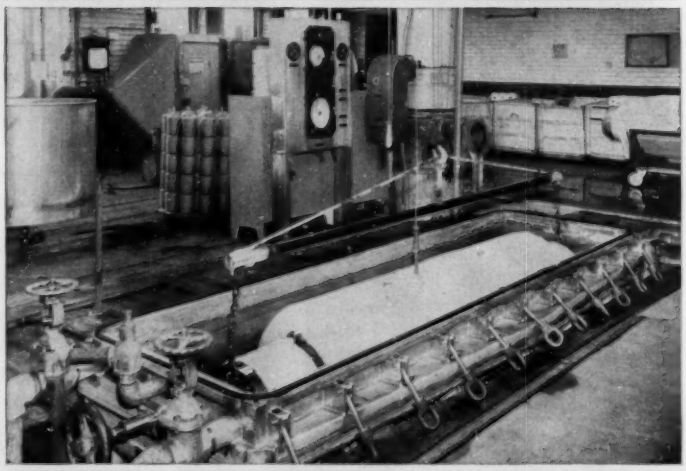
The manufacturing specifications required a minimum of 450 pounds as the strength standard, and since this was the critical

Taylor controlled dyeing

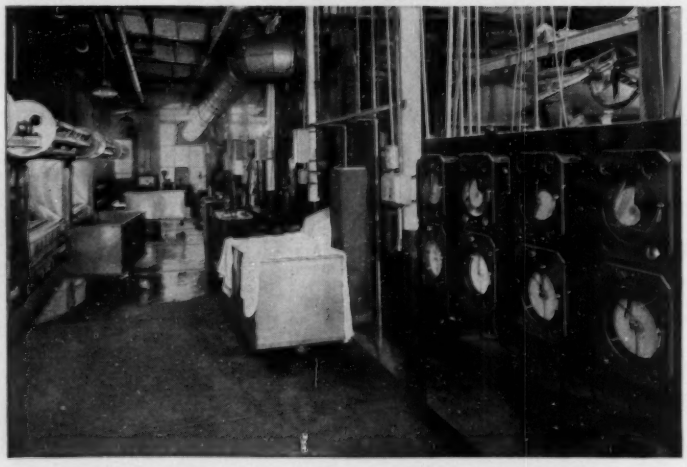
On These Package Dyeing Machines in a well-known New England Mill both the temperature and the time of the overall dyeing cycle are automatically regulated by Taylor FULSCOPE* Controllers and Process Timers. A dye liquor reversing valve, which gives a specific inside-out and outside-in cycle, is operated by a FLEX-O-TIMER* Time-Cycle Controller. This precisely times flow reversal, assuring greater uniformity.



New Pressure Bleach, Boil-off and Dye Machine is used on tricot and other knitted and open weave fabrics. Liquor is circulated at the rate of 1,500 gallons per minute, which makes precise temperature and pressure control all important. The Taylor control system eliminates the chances of human error, assures a uniformly dyed product, saves labor and permits a range of colors hitherto very difficult to obtain.



The Dyeing of Synthetics calls for extremely precise control of temperatures and dyeing cycles. The Taylor FULFLEX* Time Cycle Controllers shown here are performing so satisfactorily that the president of the Eastern mill in which they are installed says: ". . . without Taylor controls we could not otherwise maintain the accurate and precise control which is so necessary in our operations."



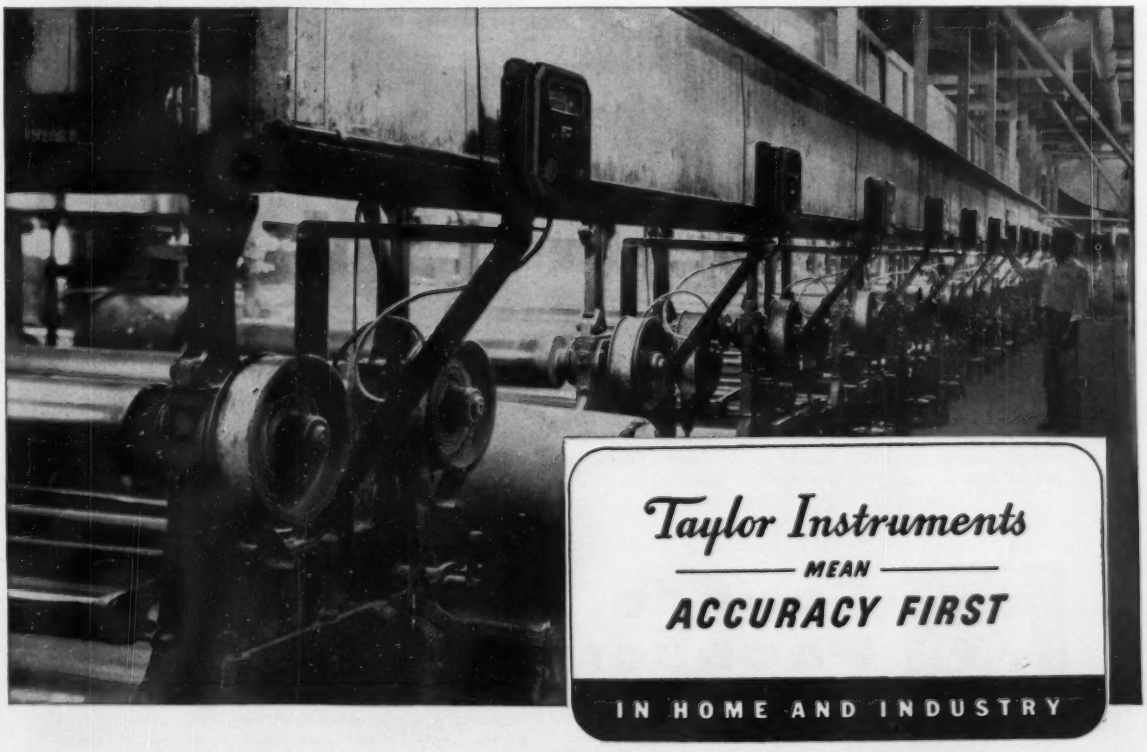
*Trade Mark

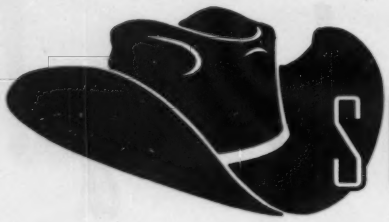
means quality dyeing!

1 Save steam
2 Achieve uniformity
3 Cut down on re-processing
4 Increase production

For Pressure Dyeing, Piece Dyeing, Jig Dyeing, Package Dyeing, Pad Dyeing or any type of wet finishing, there's a Taylor control system that will help you cut costs and maintain quality. And Taylor Field Engineers stand ready, willing and able to help you decide on the right instrumentation for your particular needs. Why not give your local Taylor man a call today? Taylor Instrument Companies, Rochester, N.Y., or Toronto, Canada.

Dye Jig operating costs have been cut, production and efficiency have been increased, thanks to the Taylor control system illustrated below. The Indicating Temperature Controller automatically maintains uniform dye liquor temperature, regardless of wide variations in steam pressure in the header. Automatic throttling control maintains an even steam temperature with no overpeaking, resulting in big steam savings.





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for BETTER Customer Service!

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SONOCO tubes and cores have long been regarded as "standard of the world." Available in practically any length and wall thickness, from ⅛" to 36" I.D. DURO returnable paper mill cores with Bermico Metal Ends in sizes 3" to 6" I.D. Economical RHINO non-returnable cores in standard and special sizes. SONOCO also supplies a wide variety of specialty cores from ¼" O.D. and up, in any length, with smooth or rough surfaces. Furnished in plain or in colored stock, or wrapped with parchment, cellulose or novelty paper. Can be printed inside and out, or lacquer tipped for identification. Spiral or convolute wound.

ECONOMICAL CARRIERS FOR —

• Newsprint • Wax Paper
• Cash Register and Adding Machine Paper
• Cellophane • OR any paper that can be wound on a core!

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PAPER CARRIERS
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Fig. 1
Breaking Strength of Parachute Cord
(pounds)

519	520	502	502	518	518	502	514	492	494
504	520	500	512	510	506	500	490	500	496
512	510	506	504	512	524	530	490	512	504
521	512	504	502	520	500	504	490	494	504
503	502	505	518	511	500	500	482	494	507

Fig. 2
Strength Shown in a Frequency Distribution

Pounds		Total
530	I	1
520	++++ IIII	9
510	++++ ++++ III	13
500	++++ ++++ ++++ IIII	19
490	++++ II	7
480	I	1
470		
460		
450	Customer Minimum Standard	

value to watch in the testing, the superintendent felt he could follow it best by means of the frequency distribution.

Since he had to have a permanent record in his own files as well as give a report to the customer, he had the strength results grouped on one sheet for each batch of 50 units.

He would thus have a record without any mathematics being required on the part of anyone. Furthermore, it would enable him to see at a glance what the trend of the individual strengths was, and above all, would immediately show him the critical value and its frequency.

Critical value is here used in the sense that it is the nearest to the standard minimum and therefore must be under closest observation. In this case it is 480 pounds, and, consequently, there was a conservative leeway between it and the standard.

The quality control engineer found the use of the frequency distribution to be a distinct help in enabling him to quickly ascertain the whole pattern of the strengths.

This can be readily seen by comparing the ease of analyzing the frequency distribution, Figure 2, as against that of the tabulation of strength results, Figure 1.

CONTRIBUTOR No. 8794

HOW OTHER MEN MANAGE

Try This Method for Weaving Cuts of Uniform Length

EDITOR TEXTILE INDUSTRIES:

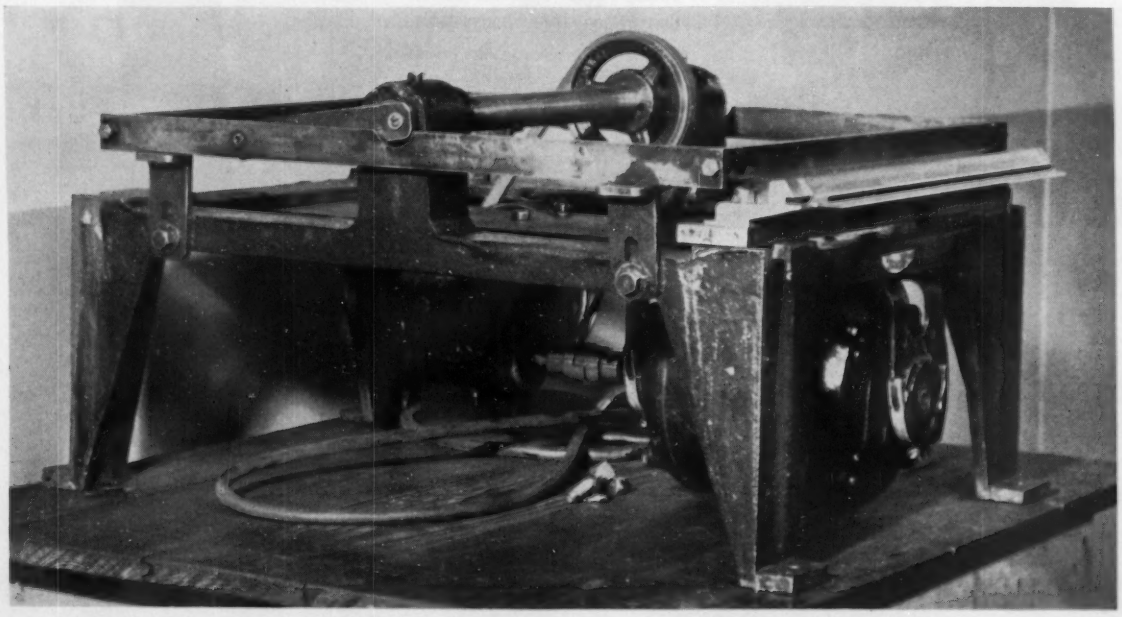
We had considerable trouble in the past in controlling the yardage of cuts of cloth coming from the looms. Frequently they would vary as much as 30 or 40 yards from standard.

We could not mark the fabric with dye or chalk, since it was not cleaned in any way after it was woven.

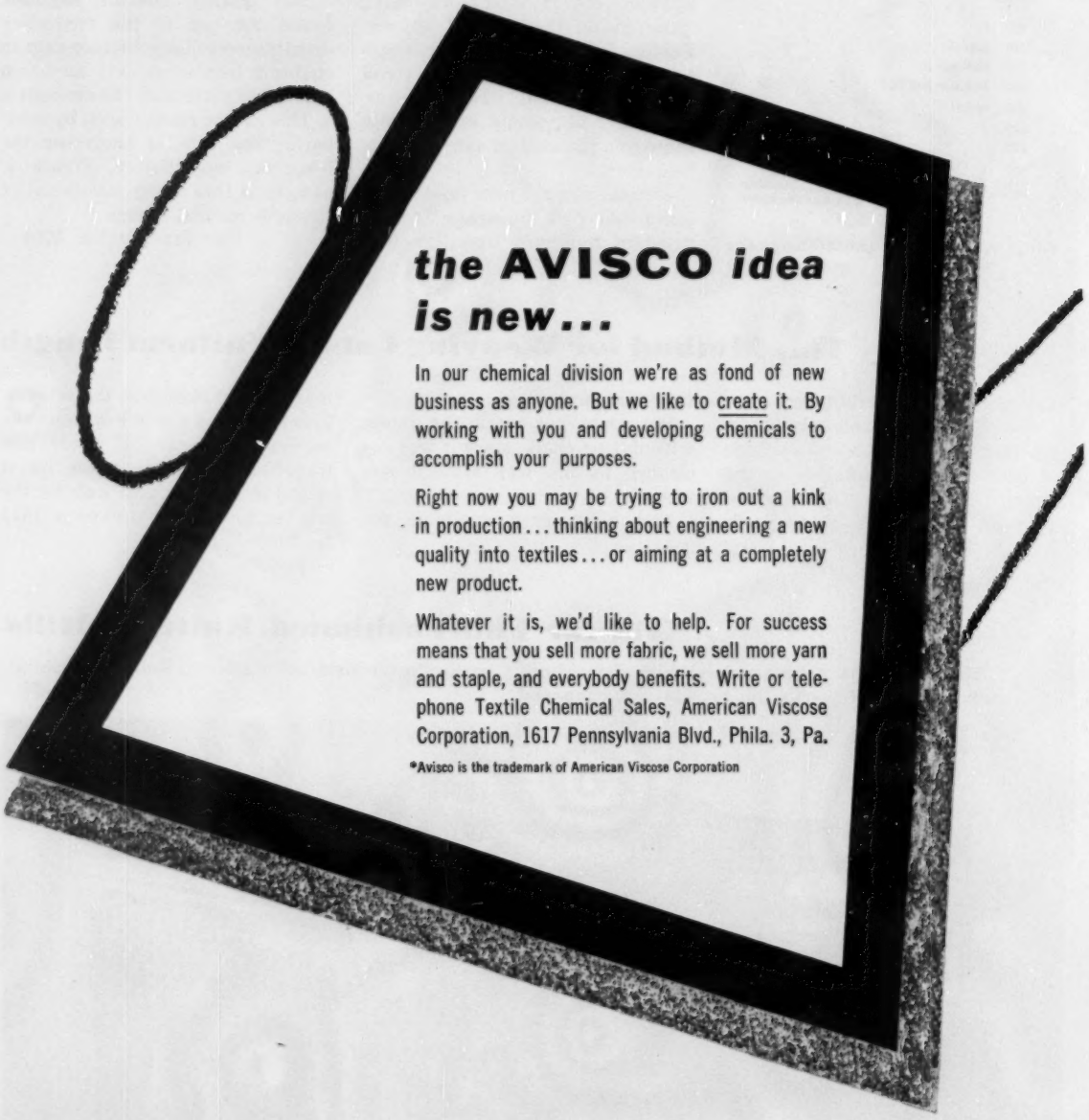
The only place available for marking the cloth was the selvage. This presented a problem, since the selvage was only ¼" wide and therefore any mark made on it would be small and difficult for the weaver to see. *(Continued p. 191)*

Aid for Full-Fashioned Knitting Mills

This gadget is a break-in machine for rebuilt sinker heads. It works the head at 135 cpm and readies it for installation into the knitting machine.
—*Staff*



GROW WITH



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In our chemical division we're as fond of new business as anyone. But we like to create it. By working with you and developing chemicals to accomplish your purposes.

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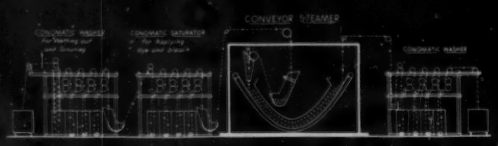
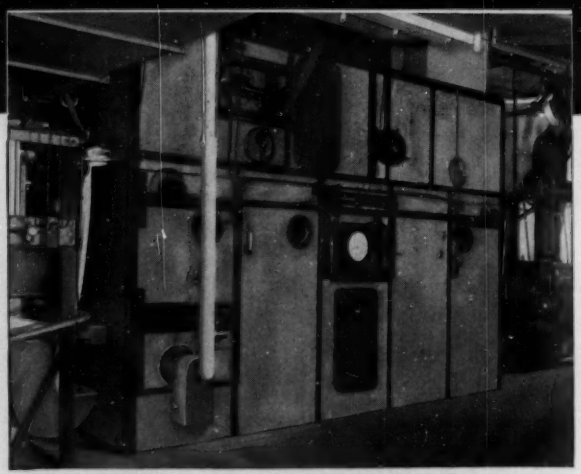
TEXTILE CHEMICALS



Installation View of Con-o-matic Washer in Continuous Bleach Range.

For improved quality of knit goods and profit making production . . . install a

PROCTOR CONTINUOUS BLEACH RANGE



Installation View of Steamer Unit in Continuous Bleach Range.

This range has been field proven, and is now producing highest quality tubular knits at the P. H. Hanes Knitting Co., in Winston-Salem, N. C. Through the use of a Con-o-matic Saturator, this range is adaptable to be used in applying fluorescent dye, which is one of the latest techniques of the knit goods industry.

Discuss the possibilities of adding a Proctor Con-o-matic washer to your present production set-up. The tapered squeeze rolls (Pat. app. for) assure a continuous trouble-free, tension-free operation.

Proctor engineers will be glad to discuss your knit goods problem with you at your earliest convenience. Why not present your problem to men who can help you.

WRITE FOR DETAILS—PROCTOR & SCHWARTZ EQUIPMENT FOR THE TEXTILE FIELD

AUTOMATIC BLENDING SYSTEMS • WEIGHING FEEDS • PICKERS • SHREDDERS • BALE BREAKERS • SYNTHETIC CARDS • GARNETTS • DRYERS FOR FIBROUS MATERIAL • YARN DRYERS • HOT AIR SLASHER DRYERS • CLOTH CARBONIZERS • ROLLER DRYERS AND CURERS • LOOP AGERS FOR PRINT GOODS • TENTER HOUSINGS • OPEN-WIDTH BLEACH SYSTEMS FOR WOVEN FABRICS • MULTIPASS AIRLAY DRYERS • NYLON SETTING EQUIPMENT • CON-O-MATIC WASHERS • CONTINUOUS BLEACH SYSTEMS FOR PRODUCING TUBULAR KNITS EQUIPMENT FOR "SEPMANIZED"® SHRUNK-TO-FIT FABRICS • CARPET DRYERS

PROCTOR & SCHWARTZ, Inc.

Manufacturers of Textile Machinery and Industrial Drying Equipment. Philadelphia 20, Pa.

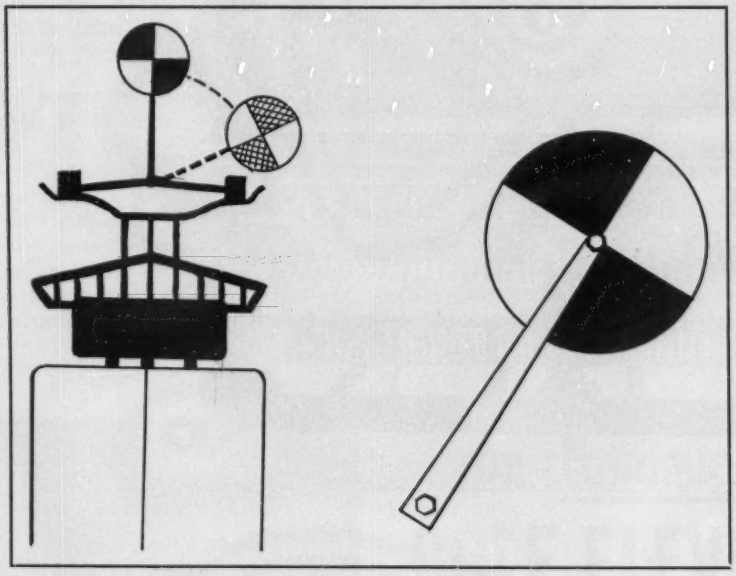
(Continued from page 187)

We solved the problem by having our dresser tenders apply a dye, different in color from the warp, for about six yards in the selvage of the warp at the end of a cut. This gives the weaver plenty of time to see the cut marks, and assures that our rolls will be doffed in cuts of near-uniform size.

The cutter does not object to the dyed yarn, and in addition to our now being able to deliver rolls of uniform length to the cutter, we have also reduced our waste from short ends. CONTRIBUTOR No. 8754

HOW OTHER MEN MANAGE

Reduce Winder Down-Time with this Signal for Service



EDITOR TEXTILE INDUSTRIES:

We use movable flags on the end of our precision winders to signal to the service man when the bobbins of yarn in the trough are running low. The flag is raised to an upright position by the winder operative when the trough should be serviced, and is returned to the down position by the service man when the trough has been refilled.

The flag is composed of a 6-inch circle of ¼-inch plywood, fastened to a 16-inch arm of ½-inch steel. The flag is divided into quadrants and is painted for easy visibility over the room.

Down-time at the winders caused by operatives running out of yarn has been completely eliminated.

CONTRIBUTOR No. 8694

Spare Parts Rack Useful in Small Plant

EDITOR TEXTILE INDUSTRIES:

In a small plant such as ours, it is not practical to keep a man in the storeroom at all times. We kept ours locked, and when loom fixers wanted a new part they went to the day or night foreman, who opened the storeroom and gave them what they wanted.

This gave a good check on supplies, but was inconvenient.

We have now had some spare parts racks built (see accompanying illustration), and have placed

these at the end of the fixers' sections. These are kept filled with parts that the fixers normally need in a day's work.

Racks are checked over once a week, and spare parts added as required. Besides saving the fixers the time and trouble of going to the storeroom, it also encourages them not to keep spare parts in their tool boxes, which they formerly had a tendency to do with parts that were getting in short supply.

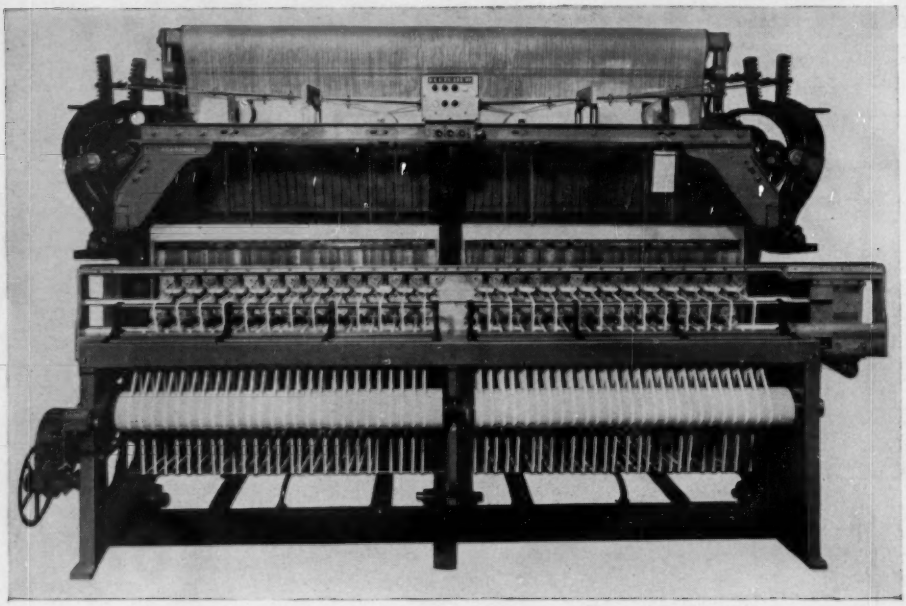
CONTRIBUTOR No. 8733

Cut Spinning Ring Polishing Costs

A tumbler made in the machine shop at Gastonia Combed Yarn Corp., Gastonia, N. C., saves considerable time and expense in polishing small metal parts. In one instance the cost of polishing spinning rings was about $52 per spinning frame. The cost of using the shop-made tumbler to do the same job was less than $5, and there were 65 frames to service, there-

THE LOOM!

for higher speeds and higher efficiencies . . .



. . . from "THE WORLD'S LARGEST SPECIALISTS IN NARROW FABRIC LOOMS"

These Semi-Automatic Looms are Custom Built. They come in different lengths with any style of batten, several types of letoff and one or two cam motions — heavy duty for weaving heavier fabrics and small index for over nine harness construction.

Call or write for a Fletcher Sales Engineer to tell you how these remarkable looms will Save Money — *Make* Money — weaving Ribbon, Tape, Light Webs and numerous other narrow fabrics.

FLETCHER WORKS

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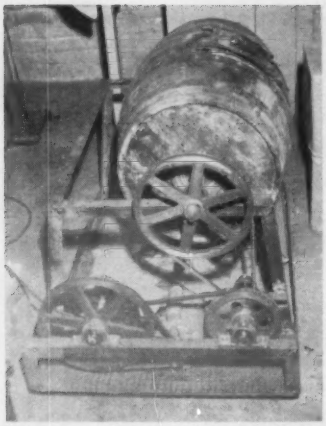


TUMBLER made at mill for polishing small metal parts.

by permitting a saving of more than $3000 to polish the rings on all of the frames just once.

The tumbler is made from a 30-gallon wood barrel with a trap door cut in one side. The barrel is mounted on a simple rectangular chassis made of angle iron, and a double reduction pulley drive is mounted to be driven by a 1/3-hp electric motor operating at 1725 rpm. The drive reduction turns the barrel tumbler at 20 rpm, which several experiments proved to be the optimum speed.

The parts to be polished are first cleaned with an Oakite product before placing them in the tumbler barrel. Small pieces of old leather and cotton felt in the barrel serve as the polishing agents for the rings, which are tumbled for 24 hours. After tumbling, the rings appear like new upon removal from the barrel.

Cost of the tumbler, which was made of scrap and spare parts, was negligible.

HOW OTHER MEN MANAGE

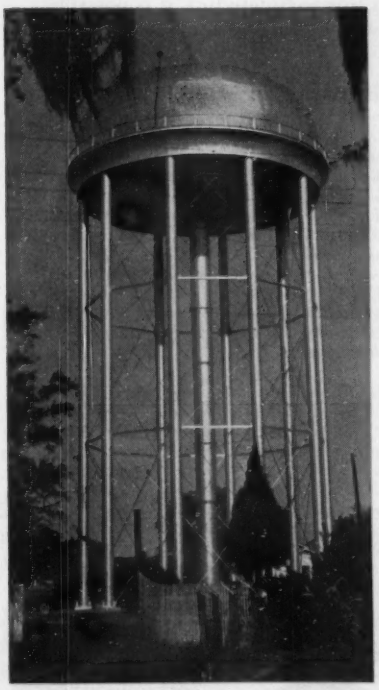
Card Stripper Guard Prevents Accidents

EDITOR TEXTILE INDUSTRIES:

During the past few years, several of our card tenders were unfortunate enough either to lose the end of the first finger or to get it badly injured while trying to remove small tufts of flat strips which had found their way to the end of the cylinder nozzle of the cotton card vacuum stripper.

These accidents led to the development of a small but very effective guard or nozzle protector. This guard consists of a brass flange 2½ inches in diameter, with either a round or a square hole, as necessary to fit the two types of cylinder nozzles.

The flange is setscrewed about ½ inch from the end of the cylinder nozzle, which usually gives enough clearance to allow the



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COLE ELEVATED TANKS

Design plays an important part in tank maintenance. Experienced engineers design COLE tanks for easy access and minimum maintenance costs. as well as for permanence, safety and dependability.

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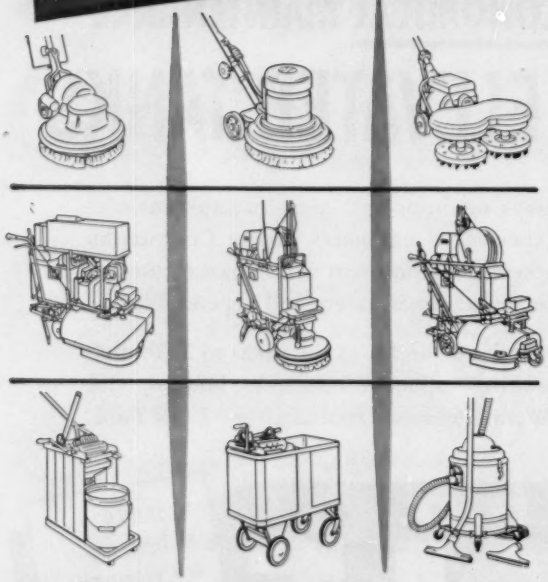
Keep your floor-maintenance men happy . . .

with Job-Fitted EQUIPMENT!

Choose from the COMPLETE Finnell Line

More than a score of models and sizes permits selection of the equipment that's exactly right for your job!



However much a maintenance man may want to do a good job, and at the same time show savings in labor costs, he's *stymied* if the machine is too small, or too large, or is otherwise unsuited to the job. Different floors and areas call for different care and equipment. That's why *Finnell makes more than a score of floor-maintenance machines.* From this complete line, it is possible to choose equipment that is correct in size as well as model . . . that provides the maximum brush coverage consistent with the area and arrangement of the floors.

Finnell makes *Conventional Polishing-Scrubbing Machines* in both concentrated and divided-weight types, each in a full range of sizes . . . a *Dry-Scrubber,* with self-sharpening brushes, for cleaning grease-caked floors . . . *Combination Scrubber-Vac Machines* for small, vast, and intermediate operations, including gasoline as well as electric models . . . *Mop Trucks* . . . *Vacuum Cleaners* for wet and dry pick-up, including a model with By-Pass Motor. In addition, *Finnell* makes a full line of fast-acting *Cleansers* for machine-scrubbing . . . *Sealers* and *Waxes* of every requisite type . . . *Steel-Wool Pads,* and other accessories — *everything for floor care!*

In keeping with the *Finnell* policy of rendering an individualized service, *Finnell maintains a nation-wide staff of floor specialists and engineers. There's a Finnell man near you* to help solve your particular floor-maintenance problems . . . to train your operators in the proper use of *Finnell Job-Fitted Equipment and Supplies* . . . and to make periodic check-ups. For consultation, demonstration, or literature, phone or write nearest *Finnell Branch* or Finnell System, Inc., 1309 East St., Elkhart, Ind. Branch Offices in all principal cities of the United States and Canada.

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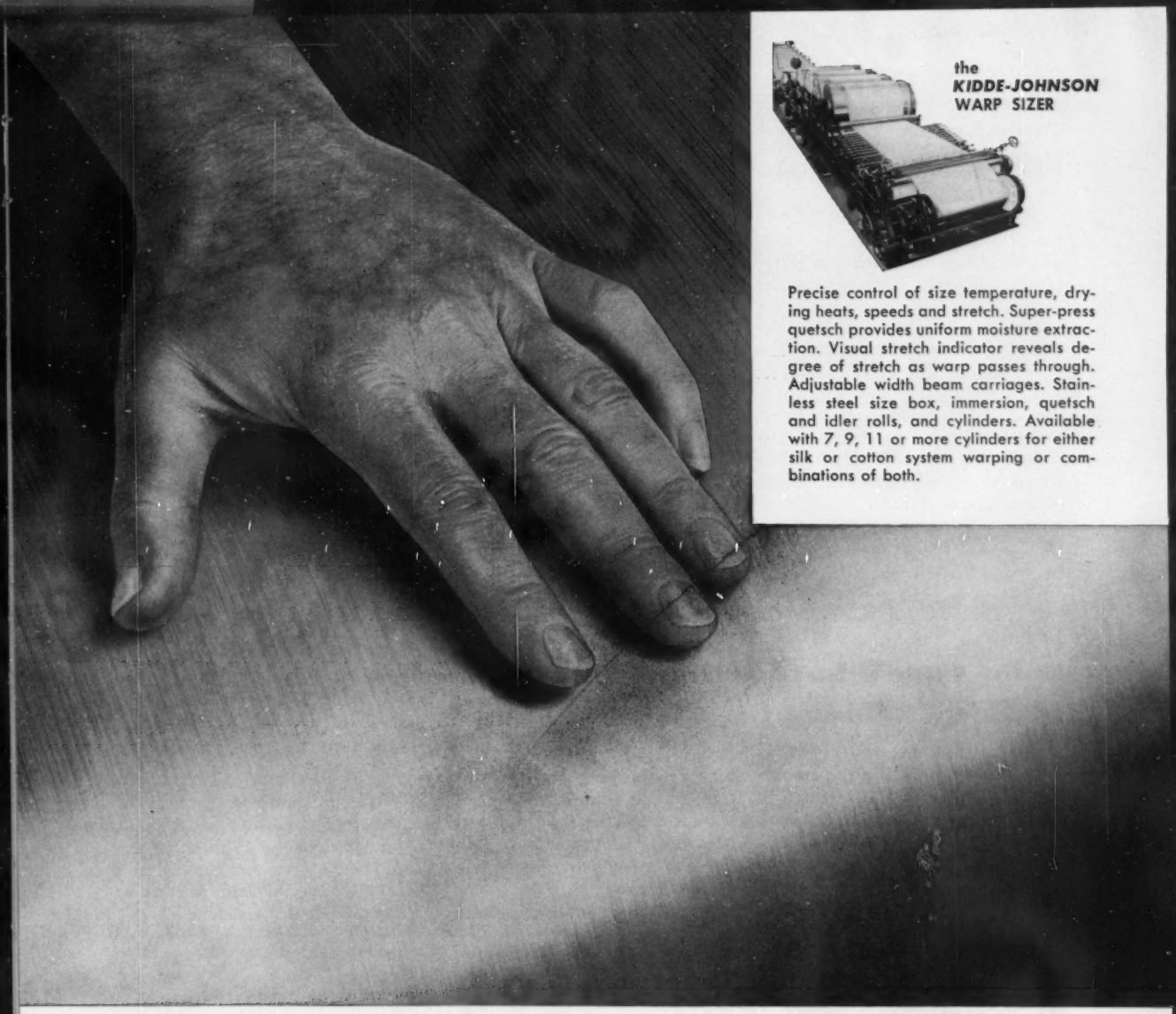

the
KIDDE-JOHNSON
WARP SIZER

Precise control of size temperature, drying heats, speeds and stretch. Super-press quetsch provides uniform moisture extraction. Visual stretch indicator reveals degree of stretch as warp passes through. Adjustable width beam carriages. Stainless steel size box, immersion, quetsch and idler rolls, and cylinders. Available with 7, 9, 11 or more cylinders for either silk or cotton system warping or combinations of both.

Do your slashers meet these 5 tests?

1. Do they give you warps on which the amount of size is even from one end to the other and uniformly dried so that there is no trace of streaks?

2. Do they give you visual, fingertip control of stretch so that you can get uniform stretch through the entire warp or a whole series of warps?

3. Do they give you hard, smooth loom beams that do not make trouble for the weave room nor reduce loom efficiency?

4. Do they perfectly size any fiber you want to put through them, cotton or synthetic, spun or filament?

5. Do they run without breakdowns, 24 hours a day, turning out a steady stream of all the warps your weaving department needs?

If they do . . . *then they must be KIDDE-Johnsons!* If not, write us today for complete details of this world-famous warp sizer.

TRICOT AND RASCHEL MACHINES • TRICOT WARPERS • HORIZONTAL WARPERS
BEAMERS • CREELS • SLASHERS • WINDER-REDRAWS • TENSOMETERS

Kidde

MANUFACTURING CO., INC. — 42 FARRAND STREET — BLOOMFIELD, NEW JERSEY

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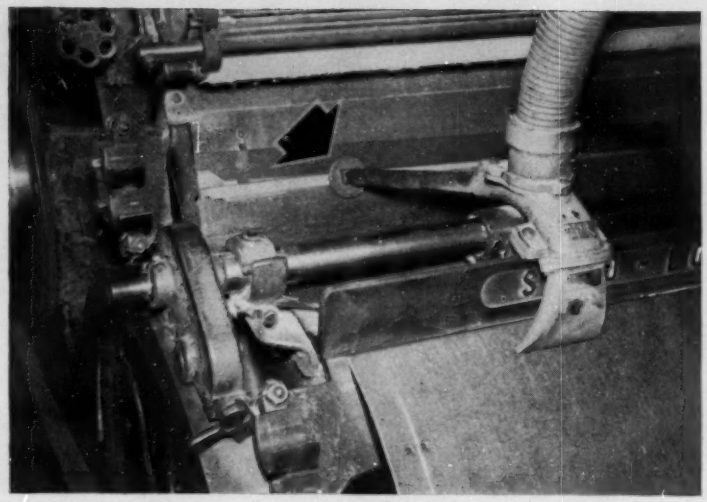
flange to pass in front of the stripper door fingers when the stripping mechanism is traversing the card.

This guard prevents much of the flat strips from accumulating and plugging the end of the receiver; and, since it is painted red, warns the operator to keep his fingers away from this danger zone.

Since we installed these guards we have had no further accidents of the type described.

CONTRIBUTOR No. 8805
(Canada)



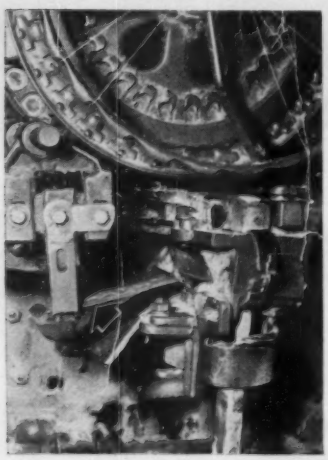
STRIPPER GUARD (indicated by arrow) saves operator's fingers.

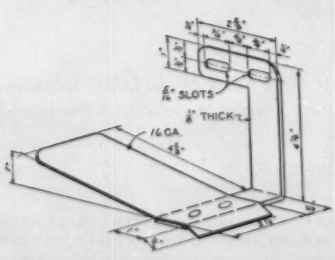
Julia Cade's Looms Have Quill Deflectors to Keep Bobbins Off Floor

The device shown in the accompanying photograph and sketch is used at Julia Cade Mills, Inc., Albertville, Ala., to prevent bobbins from being thrown to the floor at the bobbin transfer. As a bobbin is ejected from the shuttle, it strikes the projecting plate of the device, which directs it into the quill can.

As shown in the photo, the device is bolted to the filling knife carrier bracket and trip bracket of the Stafford thread cutter. The bobbin deflector is patented.

The devices were made in the mill by special arrangement with the holder of the patent.





Special Forms Double Production on Preboarders

(Continued from page 167)

Double Production. Production on one pre-boarding machine is now 300-320 dozen pairs in eight hours; 150-160 dozen pairs was the limit before the special forms were installed. This mill is among the first to use the double forms in production.

Triple forms were tried and proved satisfactory on misses' and infants' sizes, which are small enough to permit three forms on each stand.

In this mill the socks are given only one boarding treatment, and this is done after dyeing. This procedure is not satisfactory unless the dyestuffs are fast to high temperature. 80% of the colors used in this mill are after-treated to make them fast enough to stand the temperature in the boarding machine. The nylon is treated in the dye bath to make it more absorptive to the colors.

Cuts Cost in Half. Only the best acid and acetate dyes are used on nylon in this mill, thereby permitting the short cut method of boarding.

The operatives like the double forms on each stand, and cost of boarding is cut in half, except for labor, which remains the same. Less steam is used, and maintenance and upkeep are also cut in half. Cost of the double forms is about the same as conventional forms.

No disadvantages have been noted in using these double forms.

CARDING IS THE FOUNDATION FOR QUALITY

NO. 21

Additional Tips on Woolen and Worsted Card Clothing

Over a period of many years various manufacturing processes have been developed by the card clothing manufacturer with the idea of continually improving the card clothing and solving carding problems existing in the Card Room. Following are the terms as applied to some of these processes and their advantages.

1. Cadmium Plated Wire: Is standard card wire plated with cadmium by either hot dipping or electro coating. This coating is a rust preventative and is a definite advantage in prolonging the life of card clothing where stock is damp or where the card room atmosphere is unusually and constantly high in humidity. The plating does not reduce the tensile strength of the wire.

2. Hardened Point Card Clothing: The points of the wire have been subjected to a controlled heating to a temperature above the transformation range of the wire, followed by immediate quenching of the wire in a water bath to create a glass hard point on the wire. When there is apt to be excessive wearing away of the point of the card wire during the carding operation, e.g. feed rolls, lickerins (flexible and metallic) and metallic breasts, the points of wire are generally hardened to give longer life to the card clothing. Hardened point card clothing is also used where the stock is abrasive, e.g. asbestos.

3. Pressed Point Wire: The points of this type are pressed finer on the sides in the manufacture of the tooth. Since carding is done on the point of the wire, pressed point wire is desirable where the mill uses a fairly coarse wire, e.g. 24 round wire; for by pressing the point to a #26 wire count, a sharper point will result; yet the strength of the #24 wire at the base of the foundation is not sacrificed.

4. Diamond Point Card Clothing: This wire is "cut" on the card setting machine with a triangular point making grinding unnecessary. The coarser wires, particularly shaped types, e.g. lickerin wire (12/24), are generally diamond point, for it would be impossible to obtain the desired working point on such a coarse wire through grinding. Also, diamond point wire is used for drag roll fillet, feed rolls, and many special types of card clothing where a needle point is desirable for the specific operation.

5. Uncarded Stock Eliminator: Is worker clothing that has a shorter tooth and an extra strong pitch. This wire is generally used on the first two workers of the woolen card and due to the many different blends of today has proven to be very satisfactory. The sharper pitch tends to grab and hold any threads or pills, giving the cylinder a chance to card them out.

6. Side Ground Card Clothing: Is produced by a series of grinding discs set between the rows of wire that gradually taper the wire above the knee to a finer point on each side. The tapered points mean easier stripping, less loading, and a sharper carding point. Many of the coarser wires, due to their greater cross section, are side ground to give a sharper carding point.

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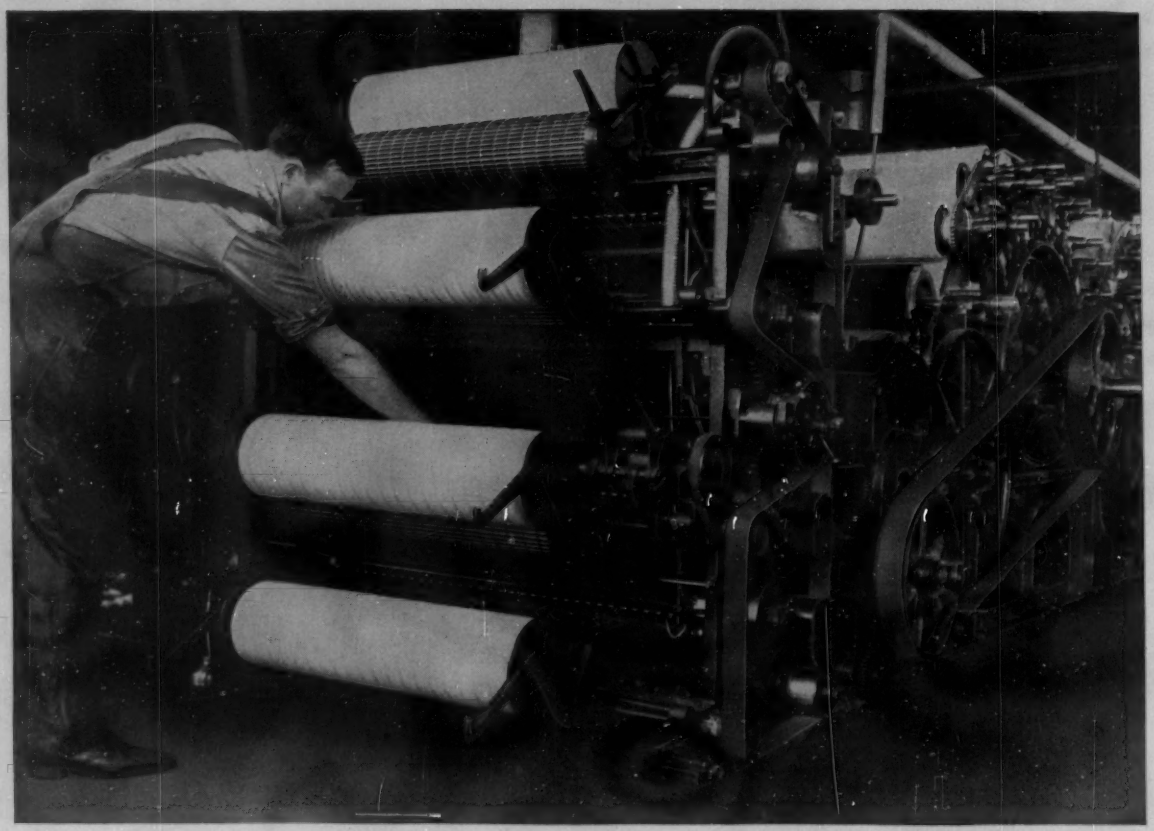
please turn the page



QUALITY? PRODUCTION?

Many woolen and worsted mills have improved the one and increased the other after adopting our recommendations. Perhaps you can do likewise.

All you have to do to find out is to ask us to send a practical card man to inspect your cards and card clothing. You may be using the wrong clothing or your card settings may be wrong. In any case our man will tell you the facts and you can make your own decisions.

Inspection of cards is only one of hundreds of problems which you and your employees have to think about. We pay men to do and think of nothing else. It is logical therefore that they can, in many cases, save mills' time and money and improve the quality of card output.

Write us at Fall River for an appointment. No obligations.

ASHWORTH BROS., INC.

American Card Clothing Co. (Woolen Division)

Fall River*†‡ Worcester† Philadelphia*†‡ Charlotte†‡
Greenville*†‡ Atlanta†‡ Dallas†‡ (Textile Supply Co.)
Los Angeles 62, Calif. (E. G. Paules, Representative)

*Factory †Repair Shop ‡Distributing Point

3 FACTORIES • 6 REPAIR SHOPS • 7 DISTRIBUTING POINTS

PRODUCED BY AMERICAN WORKERS

Ashworth

CARD CLOTHING

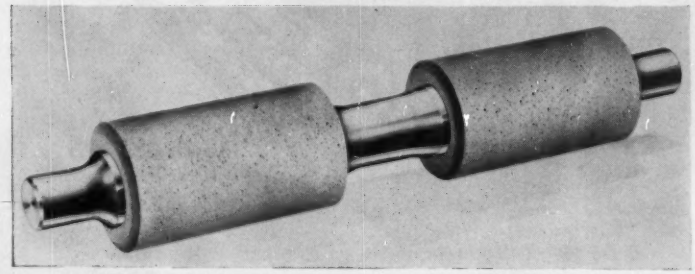
PRODUCED BY AMERICAN WORKERS

Textile Industries

for September 1955 presents

NEW EQUIPMENT PARADE

Machines and Equipment . . . Supplies and Services . . . Dyes and Chemicals . . . Books



Top roll fitted with Dayton Rubber Co.'s EW-540 cots.

Cots Keep Renewing Surface, Seldom Need Buffing

Recently placed on the market were cots that virtually eliminate the need for buffing because they constantly renew their gripping surface while in use.

This action is accomplished in the construction of the cot itself. It is made up of micro-porous holes and minute particles that keep dropping from the cot during use. This creates more tiny holes that form a constant gripping surface.

Savings are achieved not only by less downtime for machines, but by increased production and improved quality. Ends-down and lap-ups occur much less frequently when the new EW-540 cots are utilized.

Practical elimination of "eyebrowing" is another saving made possible, and humidity does not affect the cots. Also, they are made from natural and synthetic rubber compounds which are static-resistant and oil-proof.

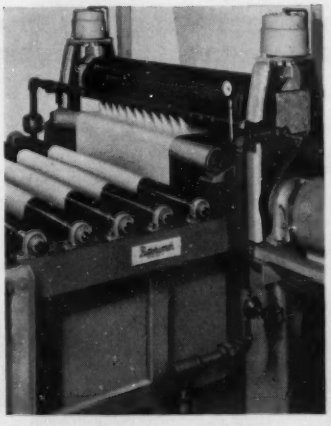
The Dayton Rubber Co., Dayton, Ohio.

More data? Write ◂ or use card, p. 233; list J-101

Get Complete Spray Coverage of Cloth on Wet Processing Equipment

Now available for installation on new or present wet processing equipment is the Emerson Spray which provides complete spray coverage of every inch of cloth from 24 to 256 inches. It is designed for use with either fresh water or for recirculation in closed systems.

Each stainless steel nozzle has a grooved orifice, and each nozzle is set in the shower pipe so that the orifice is offset by 5 degrees from the direction line of the pipe. From the grooved orifice comes a fan-shaped spray, and the 5 degree offset affords complete spray coverage of equal pressure direct to the surface, with no interference from adjacent sprays.

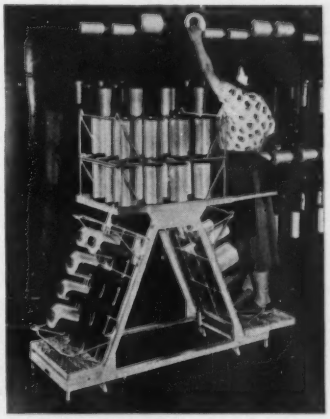


Nozzle orifices are kept clear by the mechanical rotary action of stainless steel brushes mounted on a cleaning rod directly in line with each nozzle. The brushes, which are a patented device, operate as a unit when the handle at the end of the shower pipe is turned. An internal flush valve also permits complete pipe length flushing to remove foreign matter.

H. W. Butterworth & Sons Co., Bethayres, Pa.

More data? Write ◂ or use card, p. 233; list J-102

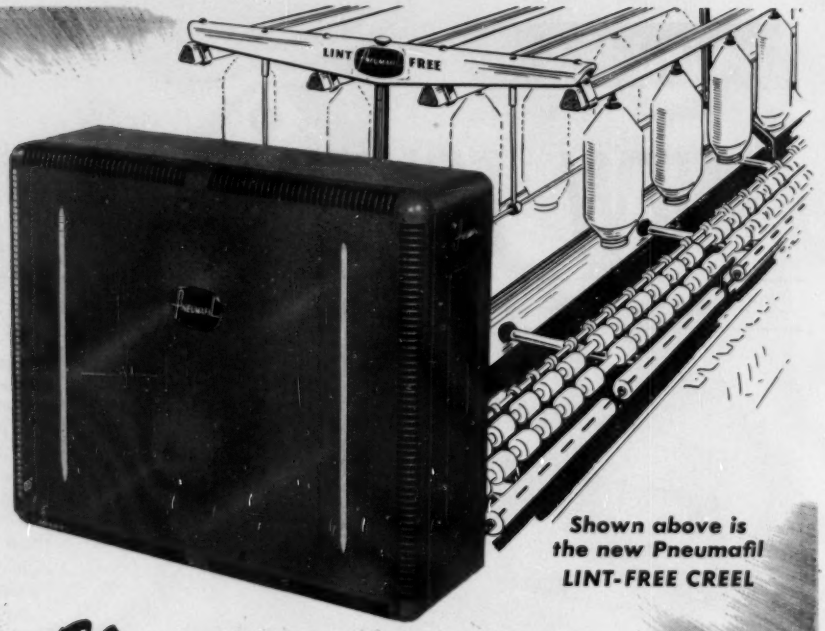
Doff Truck for Twisters Saves Time and Labor



Use of a specially designed industrial hand truck has been found to reduce labor and time in putting on and removing spools of yarn from twisters.

Called a doffing truck, it holds up to 48 spools of yarn. Completely mobile, the truck rolls smoothly on large ball-bearing casters.

Spools of untwisted yarn are taken from racks on top of the truck and placed on the twister. At the same time, cones of twisted yarn are removed from the twister and placed in other racks along the sides. Thus, in one quick operation attendants



Shown above is the new Pneumafil LINT-FREE CREEL

THE *New* PNEUMAFIL SYSTEM with "YEARS AHEAD PERFORMANCE"

The aggressive mill operator, thinking of the future, demands equipment that is geared to the advancements that are being developed for the years ahead. His new equipment must be LIGHTER but stronger; SMALLER, yet of greater capacity; VERSATILE, to be adapted to changing conditions.

Pneumafil's new Economizer System meets these years-ahead requirements with:

- Increased air volume for added cleaning, less horsepower—lower operating costs
- Compact self-contained unit—less space requirements
- Greater collection capacity—holds 64 percent more fibers
- A rugged piece of machinery—mirror smooth baked-on enamel finish inside and out
- Completely unsurpassed versatility—interchangeable from Unit to Central Air, Central Air to Unit type in minutes

The NEW Pneumafil Economizer System is designed, engineered and produced to deliver "years ahead performance" for you today.

WRITE PNEUMAFIL CORPORATION, CHARLOTTE 8, NORTH CAROLINA, FOR BROCHURE.

Atlanta, Georgia *Needham Heights, Mass.*

PNEUMAFIL®

Pneumafil Economizer Unit
Central Air System
Central Material Recovery

Lint Free Creel
Pneumastop
Pneumacard

PRODUCTS OF PROGRESS

can perform both functions in servicing the machine.

To provide added height for employees while reaching to top of machines, the truck is equipped with two auxiliary steps, at front and back. When attendant steps on, ball-bearing casters automatically retract, locking truck rigidly to floor on wide-base rubber-tipped feet.

Ballymore Co., Wayne, Pa.

More data? Write ◀ or use card, p. 233; list J-103

Pneumafil Collector Unit Improved; Three Systems Now Available

An improved model of the "Pneumafil" collector unit for suction clearing and cleaning of spinning frames is designed to perform at optimum efficiency and provide continuous, trouble-free service throughout the life of the machine with which it is used.

Designated Model C-4 and called the "Economizer" unit, it features the following:

(1) Increased air volume for maximum removal of lint and fly—with less horsepower;

(2) 50% greater collection capacity with no loss in pressure efficiency;

(3) Air is gently released in all directions through 224 specially designed vents—there are no disturbing drafts;

(4) Cast aluminum alloy end shields and double-access, vacuum-sealed doors;

(5) Self-contained and self-cleaning turbo fan and motor assembly—fan rotor, venturi, and diffusor of cast aluminum alloy are all machined to close tolerances for high efficiency performance;

(6) Totally enclosed, heavy-duty, air-cooled, streamlined motor—direct-connected to the fan rotor which is the only moving part in the entire unit;

(7) Mirror-like baked-on enamel finish, inside and out—no places for fibers to hang and accumulate.

(8) Completely versatile—can be converted from unit type to central air type collector in a matter of minutes;

(9) All components are readily accessible for inspection or service.

Concurrently with this development, it was announced that three basic types of Pneumafil systems are now available—the unit type, central air system, and central material recovery system.

With the unit system, the material recovered by the equipment is retained in the Economizer collector unit (described above) on the end of the frame, and the exhaust air is discharged directly back into the spinning room.

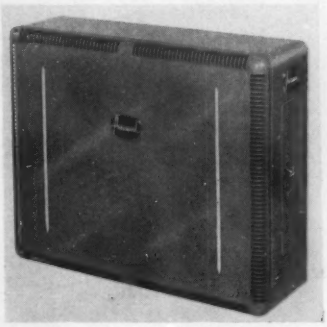
With the central air system the collector, instead of having its own individual fan and motor assembly, is connected by a duct system to a large centrally located air handling fan. This fan pulls Pneumafil air from a large group of frames, and this air, instead of being discharged directly into the spinning room, is exhausted through the central duct system to the outside or returned to the air conditioning plant for reconditioning as conditions demand.

The central material recovery system conveys the material recovered at spinning back to the pickers for reprocessing. It is automatic in operation, combining material handling and recovery with central air handling. There is no collector unit on the spinning frame. Instead, the frame suction equipment of a large number of frames is served by a centrally located material separation and air handling apparatus called "Jet Concentrator." The collected material, together with Pneumafil air, is drawn from the frames, through an air conduit system to the "Jet Concentrator" where the material is separated from the air. The material is then pneumatically conveyed to the pickers; whereas the Pneumafil air, like the central system, is exhausted to the outside or returned to air conditioning plant for reconditioning as conditions demand.

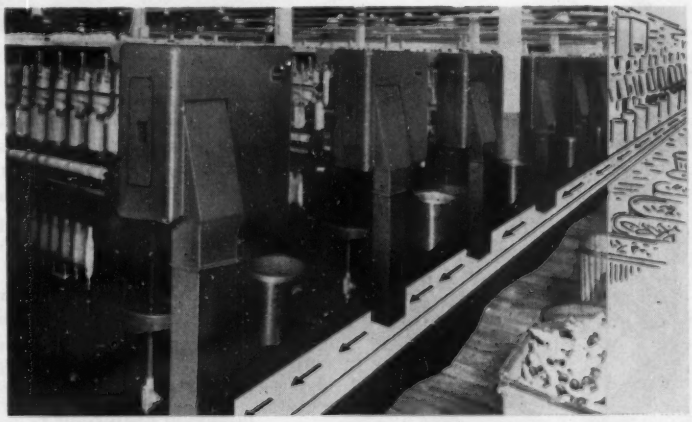
The merits of each have to be weighed in every case to determine which type best meets the requirements of an individual mill.

Pneumafil Corp., Charlotte 8, N. C.

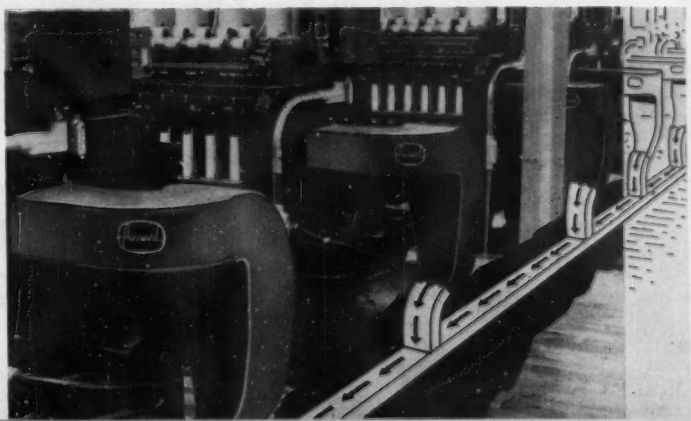
More data? Write ◀ or use card, p. 233; list J-104



The "Economizer" collector unit.



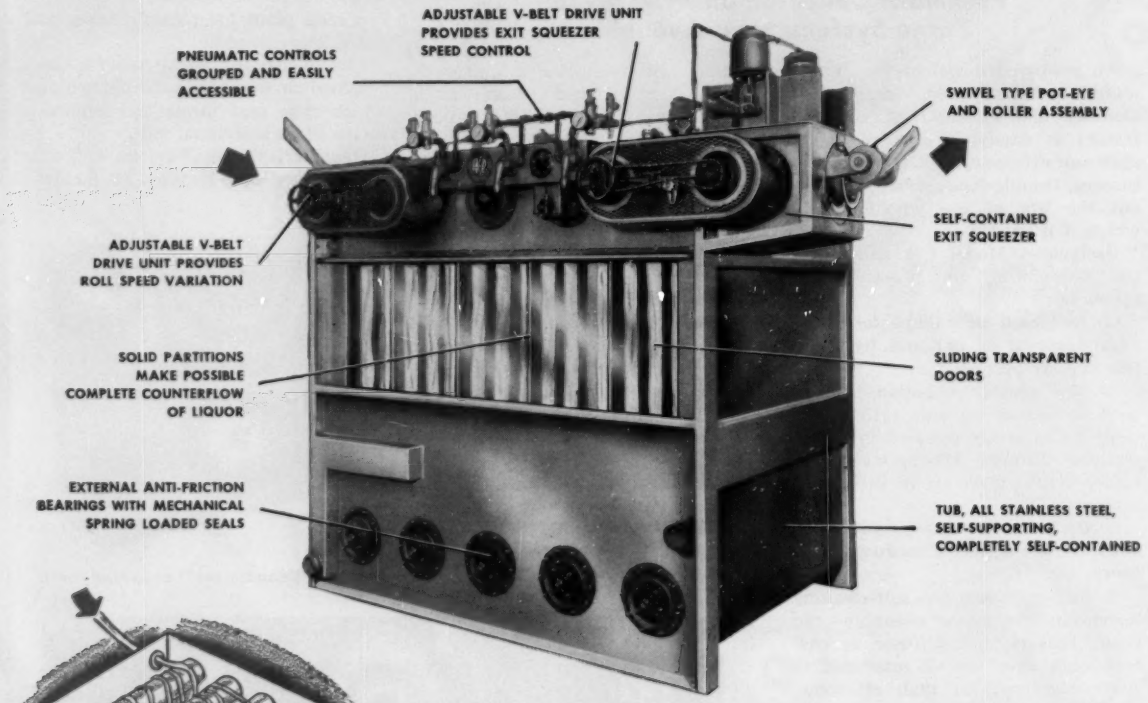
◀ Pneumafil central air system. ▼ Central material recovery system.

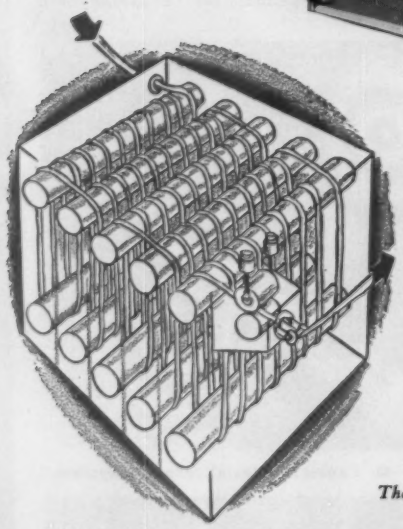


THE NEW WIESNER-RAPP
Multi-Stage Washer

(TRADE MARK) (PATENT PENDING)

VERSATILE... COMPACT... ECONOMICAL... ACCESSIBLE


ADJUSTABLE V-BELT DRIVE UNIT PROVIDES EXIT SQUEEZER SPEED CONTROL
PNEUMATIC CONTROLS GROUPED AND EASILY ACCESSIBLE
SWIVEL TYPE POT-EYE AND ROLLER ASSEMBLY
SELF-CONTAINED EXIT SQUEEZER
ADJUSTABLE V-BELT DRIVE UNIT PROVIDES ROLL SPEED VARIATION
SOLID PARTITIONS MAKE POSSIBLE COMPLETE COUNTERFLOW OF LIQUOR
SLIDING TRANSPARENT DOORS
EXTERNAL ANTI-FRICTION BEARINGS WITH MECHANICAL SPRING LOADED SEALS
TUB, ALL STAINLESS STEEL, SELF-SUPPORTING, COMPLETELY SELF-CONTAINED

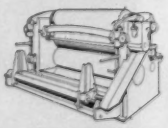


This totally-enclosed, high-speed multi-stage washer, of all stainless steel construction, will soap, wash, or treat a wide range of fabrics of various weights. It is compartmented to combine chemical or hot and cold processes. Auxiliary squeezers are designed to mount over any compartment. Great savings in water are possible because the washer is compartmented for positive counterflow. All compartments are free-draining and easily cleaned for quick changes from colored to white goods. The Wiesner-Rapp Multi-Stage Washer, which is shipped assembled, normally is mounted directly on the floor, with no pit required, and therefore little time is needed to put it in operation. It is easily threaded and can be used in harmony with other machines of a range or as an individual unit. Designed and built to Wiesner-Rapp high standards; requires minimum maintenance.

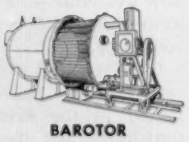
The Wiesner-Rapp technical staff will be glad to discuss Multi-Stage features with your personnel.

OTHER WIESNER-RAPP MACHINES

TIGHT-STRAND WASHER


3-ROLL PADDER

DYE BECK


BAROTOR

THE WIESNER-RAPP CO., INC.
1607 SENECA ST., BUFFALO 10, N. Y.
Manufacturers of Wet-Finishing and Dyeing Machinery

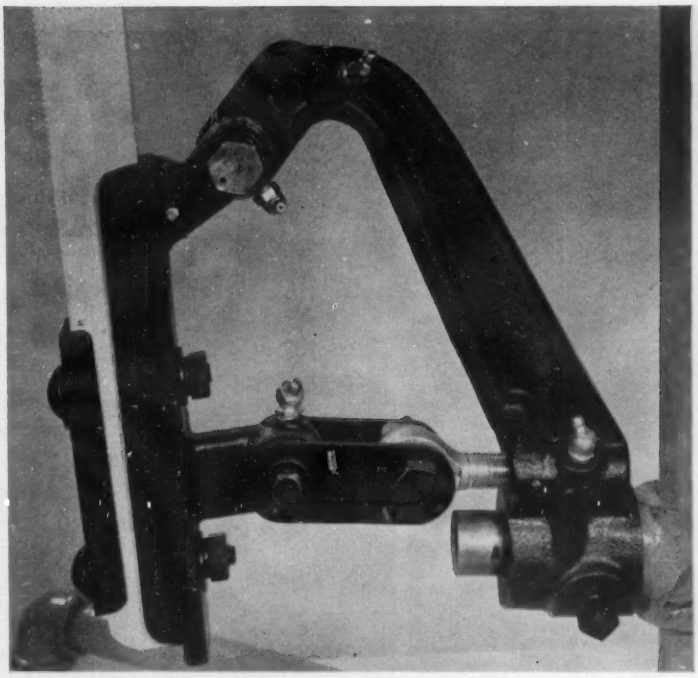
Linkage Type Parallel Improves Loom Operation

A new linkage type parallel for looms offers these advantages:

1. Controls path of picker for improved picking and boxing of shuttles;
2. Sealed lubrication for cleaner operation;
3. Hardened pin and sleeve bearing —replaceable;
4. Retains setting;
5. Clock type spring—less power is required;
6. Loom speeds can be increased depending on the cloth woven;
7. Lower maintenance cost;
8. Small parts inventory required;
9. Maintenance is simplified.

Hunt Loom & Machine Works Division of Abney Mills, 200 Academy St., Greenville, S. C.

More data? Write ◂ or use card, p. 233; list J-105



Close-up photo of the Hunt linkage type parallel. Note grease fittings.

High Production Drawing Frame Has Individually Driven Heads

A new high production drawing frame possesses many novel features. While many of the mechanical refinements of the drawing frame are new, the basic drafting element has been proved over a period of years.

The frame will be built in heads of four deliveries only, and each head will be driven by its own directly connected motor. All of the bearings are of the anti-friction type.

Of special interest is the new spring pressure system (patent pending) which is top arm loaded and adjustable as to pressure and roll settings. A new construction which eliminates all weight hooks makes it possible to create and maintain predetermined roll pressure regardless of the roll spacing.

Other design features are a fast acting electric stop motion, self-cleaning clearers, an extended creel, and the new 14" or 15" coilers to take cans either 36" or 42" high.

Production capacity is expected to be twice that of conventional frames.

Saco-Lowell Shops, 60 Batterymarch St., Boston 10, Mass.

More data? Write ◂ or use card, p. 233; list J-106

Reduce Thread Breakage at Sewing Machines and Extend Needle Life

Silicone-impregnated felt pads recently introduced are enabling mills performing sewing operations to reduce sewing room operation and maintenance costs.

The pad is simply attached by rubber bands, elastic, or holders at a point on the sewing machine where the sewing thread can pass over the length of the pad without tension. As the thread passes over the pad it picks up an excess amount of the silicone. This excess is then rubbed off on channel surfaces, eye, and shaft of the needle as the thread passes into the fabric being sewn.

The result is a heat-resistant, nonfusable, stainless, and water-proof coating that, through constant renewal, reduces thread breakage and extends the life of the needle and stitching parts.

It is emphasized that the particular silicone with which these FilMagic Lubri-Pads are impregnated coats the thread and does not penetrate it.

The importance of this new principle of lubrication lies not only in the immediate and noticeable improvement in sewability, but also in the long-range improvement in operation. Since the FilMagic method reduces heat from friction, higher machine speeds are possible. Since thread breakage and fusing are reduced, especially with synthetics, machine downtime is also reduced and time operations become more profitable.

The principle employed in this system of thread lubrication depends on the proper concentration of silicones in the felt pads. So as the supply of lubricant is exhausted by the thread passing over the pad, it must be replenished. For this purpose 4-oz cans of FilMagic Re-Loader are available.

The pads and extra cans of silicone are marketed in kits or may be purchased separately.

The Distributor's Group, Inc., 756 West Peachtree St., N. W., Atlanta 8, Ga.

More data? Write ◂ or use card, p. 233; list J-107

THE MOISTURE MONITOR
Model M-101 (Picker)

Supplied complete with stand, cables, all installation materials, and detailed instructions.

New instrument establishes new lap uniformity records

WEIGHT ALONE IS NOT ENOUGH

Uniformity of picker laps is not guaranteed by weight alone. Two laps may weigh exactly the same, but one may contain several pounds more water. The less moisture in the cotton, the more cotton required to bring the lap into tolerance.

Extra pounds of cotton added to relatively dry laps to maintain tolerance is cotton lost. Lack of uniformity in the amount of cotton in the lap increases the difficulty of maintaining uniformity in the yarn subsequently produced.

MILL INFORMATION

Necessary prior to delivery:

1. Gross lap weight and regain or bone dry lap weight
2. Average weight of your lap pins
3. English or metric calibrations required?

The Moisture Monitor

This new, electronic instrument has a moisture sensitive element located in the picker machine itself. It indicates the actual regain in each lap. It shows the required lap scale reading, including the pin, to maintain an absolutely constant mass of cotton per lap, plus or minus 1/8 of one pound.

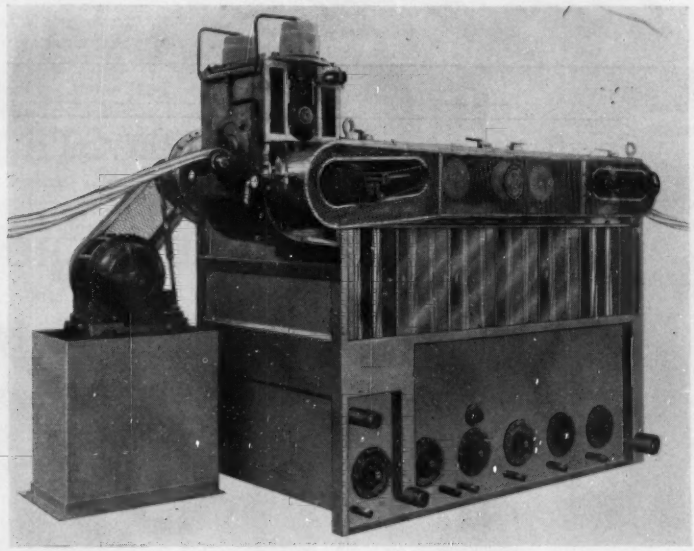
Initial mill installations have broken all previous records of uniformity. New standards far above anything anticipated have been set. Picker room production has increased, laying out cotton reduced, and frequent changes in draft eliminated.

The Moisture Monitor is easily and quickly installed at low cost. For complete information and case histories in both large and small mills, contact—

STRANDBERG ENGINEERING LABORATORIES

416 W. Market St. Greensboro, N. C.

Tension Control of All Strands Offered by High-Speed, Compartmented Washer



A totally enclosed, high-speed compartmented washer, known as the "Multi-Stage," will process a wide variety of fabrics in the rope form.

Some of its features are: tension control; high speed production—up to 300 yards per minute; versatility; low water consumption; made in various sizes; self-contained, all-stainless-steel construction; easily threaded; sets on floor—no pit needed.

As the washer is made up of a number of stages or compartments, it may be used for soaping, washing, chemical treating or a combination of these processes. Rider squeeze rolls are mounted on top of upper main rolls at desired locations to limit the amount of liquor carried by the cloth from one stage to another.

The partitions separating the stages are solid and extend from bottom of the tub to the top enclosure. Slots located at alternate ends of these partitions make definite counterflow of liquor a reality which gives a greater efficiency and results in a more uniform clean fabric.

All top rolls are driven, with the entering roll driven by an adjustable V-belt unit as is the exit squeezer. This makes possible tension control of all strands in the washer while in operation.

The washer has been mill-tested for over two years and is now being manufactured for bleaching range operation and single unit processing.

Weisner-Rapp Co., Inc., Buffalo, N. Y.

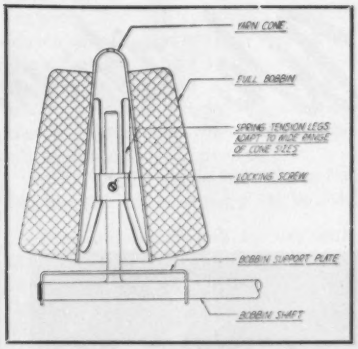
More data? Write ◆ or use card, p. 233; list J-108

Machine Prints Complete Legend on Box End in One Operation

By combining both decorative and identifying marking in one printing operation, the new Markem Model 25AC machine can completely eliminate the expense and trouble involved in maintaining inventories of preprinted boxes. The machine will print tradename, trademark or other design, plus size, width, style or stock numbers, on box ends at rates up to 75 per minute. Design imprint is made by a Markem slide-in master plate, identification detail by rotatable type wheels engraved A through Z or 1 through 0, or both letters and figures on one wheel. Applications for the 25AC include the printing of clothing boxes, hosiery boxes, and similar containers. The heavy-duty printing head has a maximum imprint size of 7⅜" x 4", with the number of typewheels and size of masterplate dependent on the legend to be imprinted.

Markem Machine Company, Keene 50, N. H.

More data? Write ◆ or use card, p. 233; list J-109



Cross section of bobbin holder.

Bobbin Holder Assures Smooth Yarn Feed in Knitting

A versatile bobbin holder for use on revolving head circular knitting machines will firmly hold in place, under spring pressure, a wide range of yarn cone sizes.

By firmly holding the bobbin in place during set-up jogging and under running conditions, a smooth yarn feed is assured with no tangling and snarling of the yarn at the cone.

The bobbin holder may be adjusted to a higher or lower position on the vertical pin for better fits to cone.

These holders are adaptable to any "Circular Jacquard" machine.

Jacquard Knitting Machine Co., Inc., Philadelphia 24, Pa.

More data? Write ◆ or use card, p. 233; list J-110

Improve Roving Frame Operation with Twin Condensers

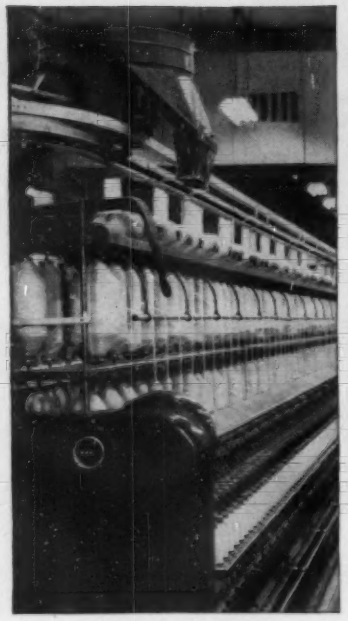
For improved strand control on J-3, FS-2, FS-3, and FS-3W roving frames, and on SS-2 spinning frames, new free-floating, slot-up nylon twin condensers are recommended. They are available as replacement items for all mills equipped with these types of frames and as standard equipment on new frames of these types.

In operation the new condensers float along, with the traverse of the strand itself, on the bottom steel roll just behind the nip of the front drafting rolls. Because they have no arm attaching them to a separate traverse bar, lint catching is minimized and any traverse motion adjustment difficulties are eliminated.

Saco-Lowell Shops, 60 Batterymarch St., Boston 10, Mass.

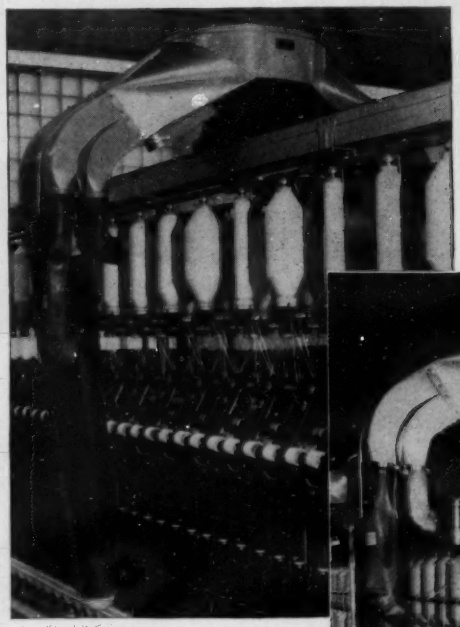
More data? Write ◆ or use card, p. 233; list J-111

We think this is news!

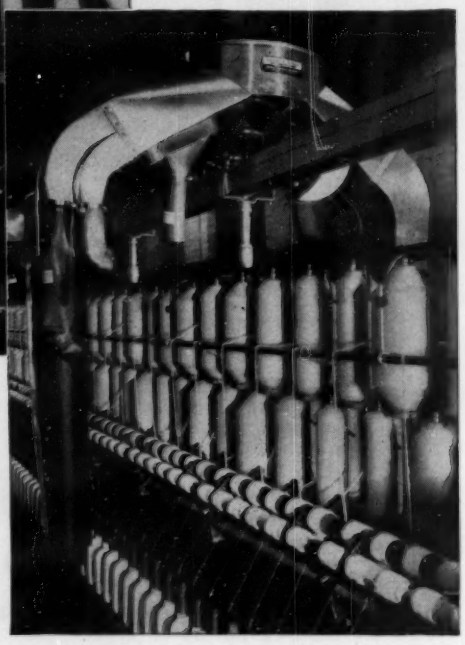


TYPE CT FRAME CLEANER

Hundreds of installations of these older traveling cleaners have paid for themselves several times over. Are still doing a good job—cleaning upper surfaces of frames.



TYPE CTF FRAME CLEANERS



From January 1954, to August 1955, 1205 cleaners of this new type have been sold to serve more than 2,000,000 spindles in 165 different mills. Most of these installations have already been completed. 758 units are new projects complete with track. 447 replace older Type CT units on existing track with necessary changes and reinforcements.

Type CTF Frame Cleaners reach otherwise inaccessible areas such as roving tapers under wide creel boards, roll stands, suction tubes and underframe. Also reach distant surfaces such as traversing thread board, ring rail and spindle rail. Numerous flexible outlets deliver air currents close to surfaces to be cleaned—in proper quantity, velocity and direction.

Type CTF Frame Cleaners operate in conjunction with Type CTR Room Cleaners for upper areas and Type CTS Cleaners for floor sweeping, all from the same electrically protected, enclosed conductor rail, rugged track.

"the best step forward in frame cleaning in twenty years"

Parks-Cramer Company

FITCHBURG, MASS. CHARLOTTE, N. C. ATLANTA, GA.

Humidifying and Air Conditioning Since 1904 — Traveling Cleaner Systems Since 1926

400

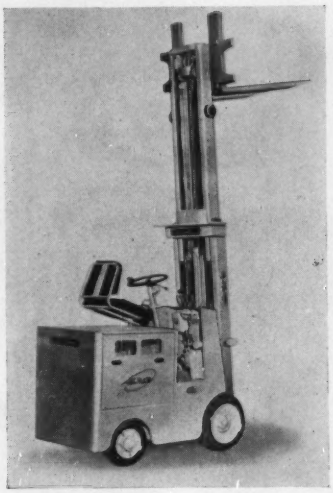
3000-lb Capacity Fork Truck

A new 3000-lb capacity electric-powered fork truck, Model F-45T3, has been engineered for maximum sturdiness, is of the center control, sit-down type, and is ideal for use in narrow aisles and confined areas. However, it does not sacrifice stability for high tiering, strength, ease of maintenance, and safe operation.

Overall length of the vehicle with 36" forks is 109"; width is 35". The truck is available with 68" full initial lift type uprights for use in low headroom areas, and 83" low initial lift uprights for high stacking jobs. Hydraulic lift and tilt are provided, as are hydraulic wheel brakes.

Other truck features include an improved cowl design for better driver visibility and "dead-man" control on the operator's seat which sets the brake and cuts off travel current when the operator leaves the truck.

Elwell-Parker Electric Co., 4205 St. Clair Avenue, Cleveland 3, Ohio.



More data? Write or use card, p. 233; list J-112

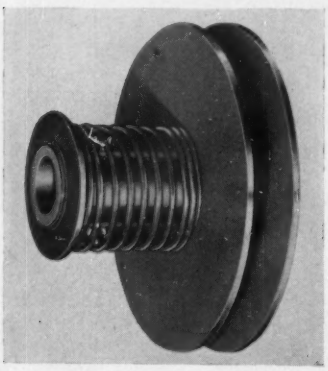
Equipment Briefs

"Splicegrip," a fast-setting, flexible **adhesive for splicing the ends of yarns** eliminates the necessity for tying knots. Operator simply applies adhesive to tip of yarn and an instantaneous bond is made.

Adhesive Products Corp., 1660 Boone Ave., New York 60, N. Y.

More data? Write or use card, p. 233; list J-115

A new low-cost ¾ hp **variable speed pulley** can be readily adapted to new or old equipment. Simplicity



of design minimizes maintenance. Requires no lubrication. Delivers a speed ratio to 2¾ to 1, using an A section belt. Maximum bore is ⅞" with keyway.

Lovejoy Flexible Coupling Co., 4922 W. Lake St., Chicago 44, Ill.

More data? Write or use card, p. 233; list J-116

For use on counting devices or similar applications which require heavy duty switches with light operating force is a new **limit switch** available in either of two contact arrangements, single-pole double throw (1ML10) or two-circuit break (101-ML10). Actuating lever is a 5" aluminum rod which can be bent or cut to fit user's needs. Operation can be clockwise or counter-clockwise.

Micro Switch, a division of Minneapolis-Honeywell Regulator Co., Freeport, Ill.

More data? Write or use card, p. 233; list J-113

A new corrosion-resistant **heat exchanger** with unique design features that eliminate cemented joints and produce continuous turbulence is called the "Polybloc." Orientation of graphite crystals gives higher thermal conductivity. Since liquids are kept in constant state of turbulence, maximum heat exchange is provided. Identical graphite blocks from which it is made can be added or removed. Initial cost is less because smaller unit is required. Scale or film removal is not necessary.

The Carbone Corp., Boonton, N. J.

More data? Write or use card, p. 233; list J-114

Now available for quality control and interplant identification are **consecutively numbered coding systems on pressure sensitive tape** which is perforated for easy and accurate application. Product versatility permits adaptation to almost any coding or identification problem. Multiple changes in numbers and colors are easily practical. Systems can be minutely detailed down to actual bobbin identification if desired.

York Tape Printers, Inc., York, Pa.

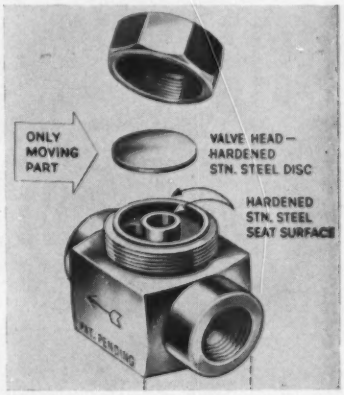
More data? Write or use card, p. 233; list J-117

A new **adjustable hub for use with the Sarco Pre/Post Boarding Machine** (see TEXTILE INDUSTRIES for April, 1955, pp. 217, 219) permits knitting mills to mount their present final boarding forms on the machine. Eliminates necessity for purchasing additional forms when Sarco machine is acquired.

Southern Mill Equipment Corp., 508 West Fifth St., Charlotte, N. C.

More data? Write or use card, p. 233; list J-118

The Type TD-50 **steam trap,** which uses the thermodynamic energy of steam to close the valve, is adaptable to any pressure from 10 to 600 psi, operates equally well on light or



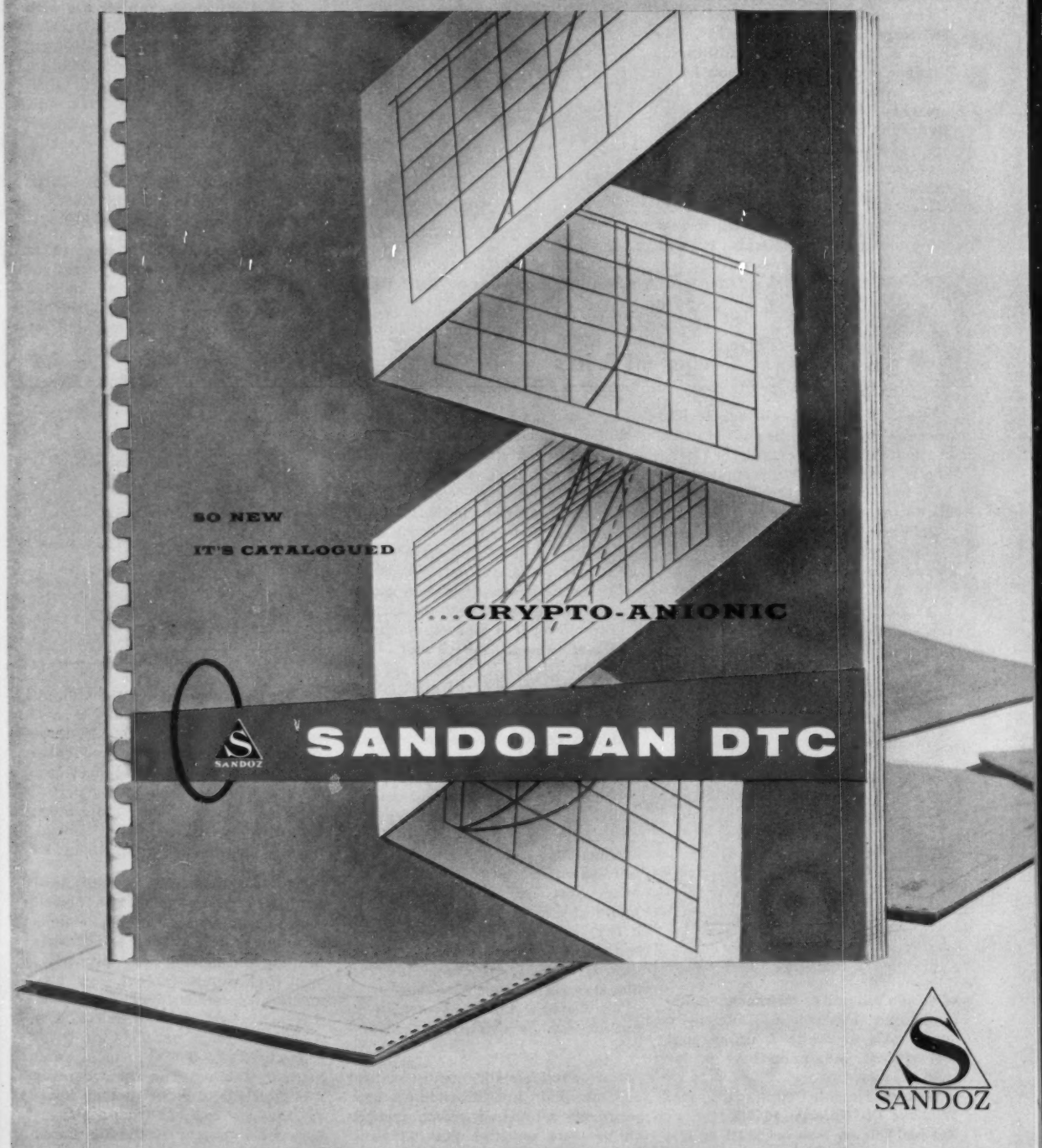
heavy loads, and closes tight on no load. Machined from stainless steel bar stock, it consists of only three parts: body, screwed cap and valve head, and a solid stainless steel disc. Very compact. One operating part.

Sarco Co., Inc., Empire State Bldg., New York 1, N. Y.

More data? Write or use card, p. 233; list J-119

Pliolite Latex 101A, a solids **synthetic latex** of the Buna S type, is well suited for a number of applications including fabric sizing and textile printing and dyeing. Some properties are: High solids content, low ammonia soap content, high tensile and tearing strength, fast drying rate, low water absorption, excellent electrical properties, good mechanical and thermal stability. For use wherever it is desirable to deposit tough, flexible, low cost coatings from a non-inflammable system is Pliolite Latex

SANDOZ



SANDOZ

announces a revolutionary new surfactant Crypto-anionic SANDOPAN DTC

A striking advance in the soap and detergent industry...

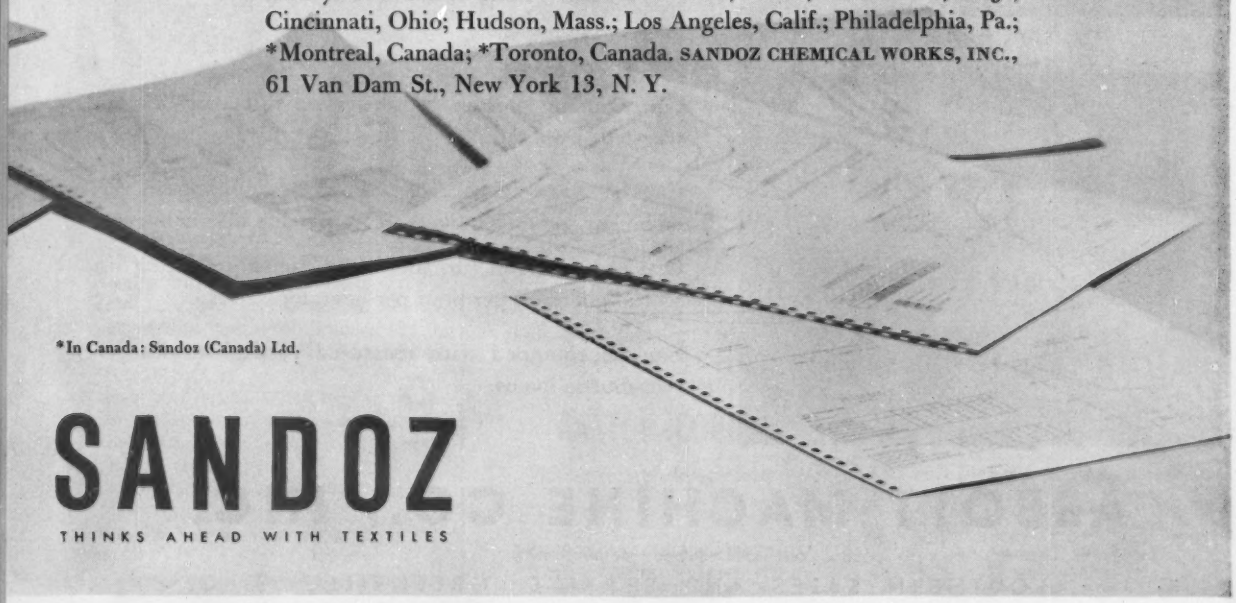
SANDOPAN DTC combines the most favorable characteristics of anionic soap with the best properties of nonionic detergents and eliminates the disadvantages of either.

SANDOPAN DTC offers you excellent stability, remarkable wetting properties and detergency.

Let us prove to you how SANDOPAN DTC:

- *speeds up your desizing*
- *improves your kier boiling or your continuous boil-off*
- *increases absorbency*
- *steps up your bleaching efficiency*
- *solves your scouring problems on synthetics*
- *raises abrasion resistance of your resin finished goods*

Call your local Sandoz office: Charlotte, N. C.; Fair Lawn, N. J.; Cincinnati, Ohio; Hudson, Mass.; Los Angeles, Calif.; Philadelphia, Pa.; *Montreal, Canada; *Toronto, Canada. SANDOZ CHEMICAL WORKS, INC., 61 Van Dam St., New York 13, N. Y.



*In Canada: Sandoz (Canada) Ltd.

SANDOZ

THINKS AHEAD WITH TEXTILES

Automatic Winders for Rewound Filling

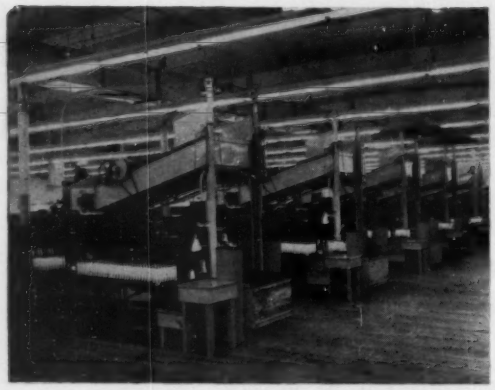
to take advantage of large package spinning, more yarn on filling bobbins, more uniform bunches, better weaving bobbins, and inspected yarn, all of which go to make a better fabric.

Abbott Traveling Spindle Package Winders

Automatic Cone or Tube Winders for warping, dyeing, twisting, quilling, sales.

Can be equipped with any one of a variety of slub catchers and inspection devices.

Production up to 1000 bobbins per hour per operator.



Abbott Traveling Spindle Automatic Quillers

For winding cotton, spun rayon, worsted, etc., equipped to doff automatically into baskets, or stack automatically into boxes.

For rewinding woolen yarn from mule and ring frames.

For winding filament rayon and nylon, etc., with automatic pinboard attachment or wide belt inspection conveyor.

Production up to 2500 bobbins per hour per operator.

Abbott Fully Automatic Radial Quiller

For smaller lots and widely diversified mills.

For winding cotton, spun rayon, filament rayon, worsted, wool, etc.

Can be arranged to deliver bobbins to Pinboard Attachment, or into baskets, or into wide belt conveyor.

One operator can run several machines producing up to 2000 bobbins per hour per operator.

Can be equipped with measured yardage device for two-shuttle looms.

ABBOTT MACHINE CO., INC.

WILTON, NEW HAMPSHIRE

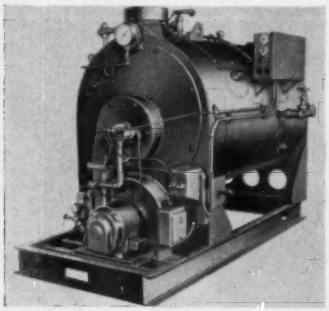
SOUTHERN SALES AND SERVICE: GREENVILLE, S. C.

165. Readily deposits clear and smooth films on drying.

Chemical Division, The Goodyear Tire & Rubber Co., Inc., Akron 16, Ohio.

More data? Write ◄ or use card, p. 233; list J-120

A new **40 hp steam generator** that is only 83¼" long, 57¾" high, and 36½" wide at the skids provides trouble-free operation and maintains

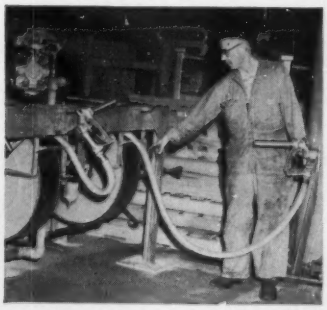


an efficiency of 80 per cent or better. Burns oil, gas, or a combination of oil and gas. Completely automatic operation of unit is controlled electronically.

Cyclotherm Div., National-U. S. Radiator Corp., Oswego 6, N. Y.

More data? Write ◄ or use card, p. 233; list J-121

The dangers inherent in having loose, tangled hose lying around traffic lanes and work areas are eliminated by use of a new **hose reel** that can be installed out of the way. Avail-



able for hose up to 3" in diameter and in models with air or explosion proof electric motor or hand crank rewind, this hose reel is connected to the source and ready for immediate operation at all times. Can be mounted on cabinets or on walls or girders near work areas. When hose is not in use, it can be quickly rewound on the reel drum, keeping it out of the way and off floor.

Clifford B. Hannay & Son, Inc., Main St., Westerlo, N. Y.

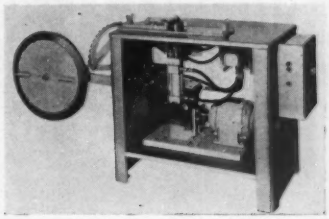
More data? Write ◄ or use card, p. 233; list J-122

Stretching of sliver being picked up from cans behind drawing frames, combers, sliver lappers, and roving frames is prevented when **sliver guides** made from highly polished aluminum and coated with Teflon to reduce friction are utilized.

Hunt Loom & Machine Works, 200 Academy St., Greenville, S. C.

More data? Write ◄ or use card, p. 233; list J-123

A coil-fed, fully automatic sealing unit that will complete over 600 splices per hour is one feature of the **Cottonband Splicer** No. 2210 which can be operated by any employee. With the machine it is possible to



splice banding material as fast as a crew can bale. Operator simply places

Gaston County

COMBINATION BEAM AND PACKAGE DYEING MACHINES

More and more mills are turning to Gaston County Combination Beam and Package Dyeing Machines as the most logical solution to a variety of dyeing problems.

Their maximum flexibility, rugged construction, and fully automatic controls are *built-in* features that mean operation at the highest performance level.

Take the short-cut to longer dyeing profits—consult a Gaston County engineer today, or write for illustrated literature.

GASTON COUNTY DYEING MACHINE

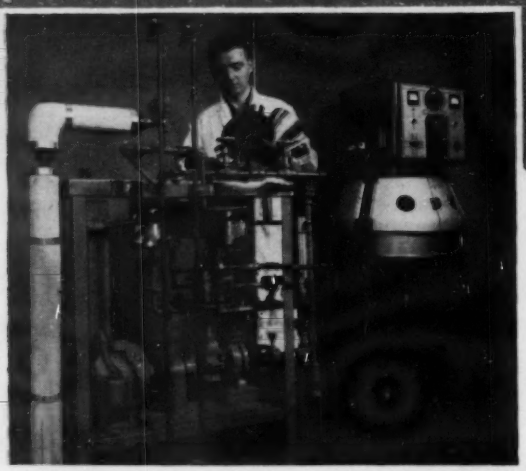
Pioneers in Automatically Controlled Dyeing Machines

STANLEY NORTH CAROLINA

Gaston County Dyeing Machine Co.
Terminal Building, 68 Hudson St.,
Hoboken, N. J., G. Lindner, Mgr.

The Rudel Machinery Co., Ltd.,
614 St. James St. W., Montreal
137 Wellington St. W., Toronto

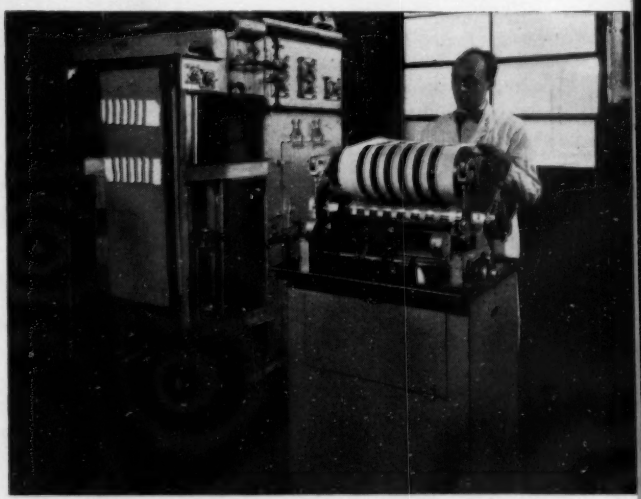
COMPLETE CUSTOMER SERVICE backs up PITTSBURGH'S BASIC DYESTUFF PRODUCTION



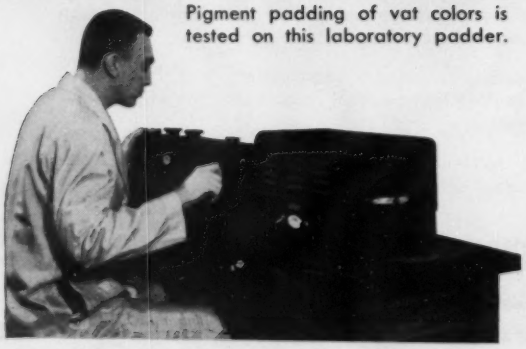
A new Customer Service Laboratory, operated by experienced personnel, stands behind every dyestuff order you place with Pittsburgh. Equipment like this pressure dyer and Fade-Ometer *guarantees* the quality made possible by Pittsburgh's coal-to-color production control.

Fastness of Pittsburgh Dyestuffs to laundering is tested in laboratory in this stainless steel Launder-Ometer.

Pigment padding of vat colors is tested on this laboratory padder.



Printing and fixing characteristics of dyes are tested in printer in foreground and in vat ager in background.



A Spectrophotometer is employed in the analysis and standardization of Pittsburgh Dyestuffs.

Branch Offices: Spartanburg, S.C., Providence, R.I.
Warehouses: Charlotte, Philadelphia, Spartanburg, Providence

W&D 5710

FINE CHEMICALS DIVISION
Dyestuffs

PITTSBURGH
COKE & CHEMICAL CO.

Dye Sales Headquarters:
SPARTANBURG, S. C.

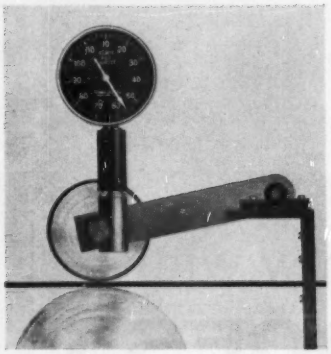
COAL CHEMICALS • AGRICULTURAL CHEMICALS • FINE CHEMICALS • PROTECTIVE COATINGS • PLASTICIZERS • ACTIVATED CARBON • COKE • CEMENT • PIG IRON

banding material in jaws of machine, presses two switches simultaneously and splice is completed. Next seal automatically feeds into machine from 2000-seal coil.

A. J. Gerrard & Co., Melrose Park, Ill.

More data? Write or use card, p. 233; list J-124

The "Standco" **direct reading surface speed indicator** literally rides the roller or drum to indicate continuously and instantaneously the rate of speed and changes of speed of moving materials such as textiles. Dial reads

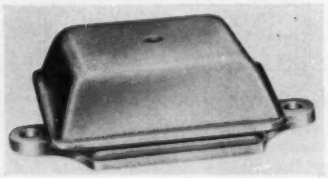


directly in fpm or ypm or fph or yph. Can be furnished with built-in counter to simultaneously give total number of yards or feet produced. Easy to install. Calibration is not affected by change in circumference of roll due to build-up of material.

Herman H. Sticht Co., Inc., 27 Park Place, New York, N. Y.

More data? Write or use card, p. 233; list J-125

The Finnflex "Floating Pillow" **vibration mounting for medium and heavy weight machinery** is a heavy duty, high deflection, rubber-in-shear mounting. Features pair of "double deflection" isolators that not

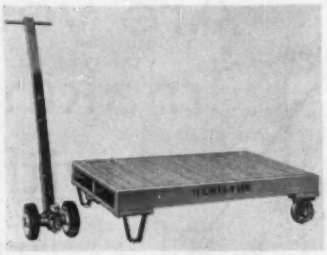


only isolate vibration, but also provide a high order of shock and overload control. Metal parts enclose and protect rubber isolators against accidental damage. Loaded overall height is only 3 inches. Available with non-walking, rubber-bottomed baseplates which eliminate "creeping" or "walking" of equipment. Capacities range from 500 to 2500 lb per mounting.

T. R. Finn & Co., Inc., Industrial Div., Hawthorne, N. J.

More data? Write or use card, p. 233; list J-126

A **lift truck system** consisting of a lift jack and engaging bracket in con-



junction with semi-live platforms provides low-cost, flexible handling in any type of warehousing or storage operation. Especially valuable in applications where use of palletizing and power trucks is not practical or possible. One or more lift jacks can be used in combination with any number of skid trucks.

The Hamilton Caster & Mfg. Co., 1700 Dixie Highway, Hamilton, Ohio.

More data? Write or use card, p. 233; list J-127

Two **new colors of solution-dyed rayon staple** are now available—Peacock Blue and Silver Grey. Withstand up to 500 hours of sunlight. Received Class 5 rating for colorfast-

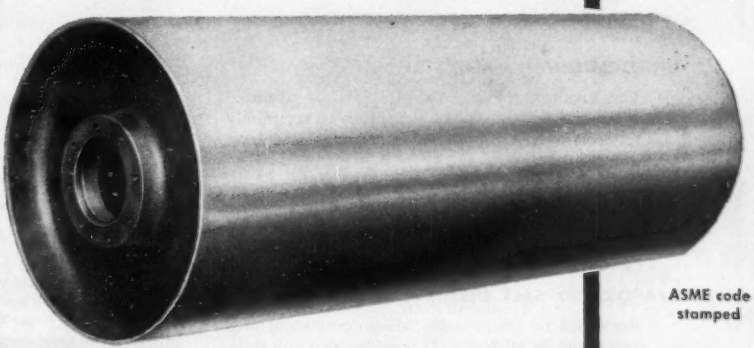
LUCEY

STAINLESS STEEL PRODUCTS FOR THE TEXTILE INDUSTRY

This new Lucey Stainless Steel Dry Can features lightweight reverse flanges and dished heads. Quality workmanship and modern engineering assures even heating. The Lucey Dry Can is available individually or in stacks complete with all accessories . . . built to any size and specification.

Stainless Steel is an integral factor in the operation of every modern wet processing plant. We are equipped to fabricate Stainless Steel equipment for a wide variety of uses.

Our engineering staff is available for consultation. Your inquiries are invited.



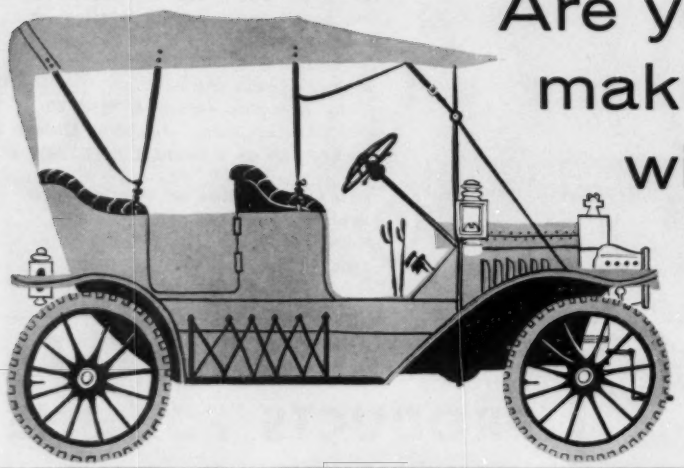
ASME code stamped

Specialists in Dry Cans and Dye Vats

LUCEY BOILER & MANUFACTURING CORPORATION

LUCEY

1514 CHESTNUT STREET
CHATTANOOGA, TENNESSEE



Are you still making Brine with "Model T" methods?

Then Save Time and Money with

THE LIXATE PROCESS

In a single piece of equipment, The Lixate Process combines a method of dissolving rock salt without agitation and a method of filtration.

MAKES BRINE AUTOMATICALLY

The Lixator makes and filters all the brine you want or need with no human aid whatever and can be located *anywhere*—even hundreds of yards from buildings and points of use.

UNIFORM QUALITY AND STRENGTH

The Lixator produces *only* 100% fully-saturated brine, self-filtered, crystal clear. May be accurately reduced in strength, without testing, without delays.

PIPED TO POINTS OF USE

Turn a tap, there's your brine—*where* you want it, *when* you want it. No handling of salt or finished brine. Economy! Convenience! Efficiency! All Lixator installations are custom-engineered.

EVAPORATED SALT DISSOLVERS, TOO

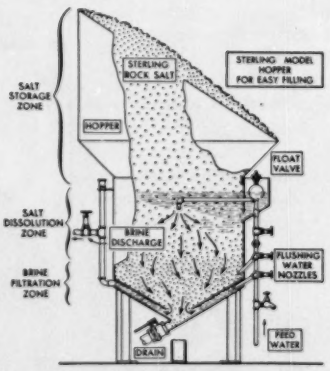
Rock Salt or Evaporated Salt—International provides both in all forms. It provides also any technical advice on salt, brine, or auxiliary equipment, required by users, for either kind of salt.

INTERNATIONAL SALT COMPANY, Inc.

Scranton, Pa.

SALES OFFICES: Atlanta, Ga. • Chicago, Ill. • New Orleans, La. • Baltimore, Md. • Boston, Mass. • Detroit, Mich. • St. Louis, Mo. • Newark, N. J. • Buffalo, N. Y. New York, N. Y. • Cincinnati, O. • Cleveland, O. • Philadelphia, Pa. • Pittsburgh, Pa. • Richmond, Va.

ENGINEERING OFFICES: Atlanta • Buffalo • Chicago



HOW LIXATOR WORKS

Rock Salt, fed by gravity, keeps tank filled. Water in dissolution zone dissolves salt, becomes 100% saturated brine. Lower bed of rock salt acts as filter. Result—crystal clear, fully saturated brine.

It costs nothing to find out what The Lixate Process can do in YOUR plant! SEND THIS COUPON NOW!

International Salt Co., Inc.
Industrial Division, Scranton 2, Pa.

Without obligation, please have an International Industrial Engineer call to show me how The Lixate Process might be adapted to my plant.

*Name*_____ *Title*_____

*Firm Name*_____

*Address*_____

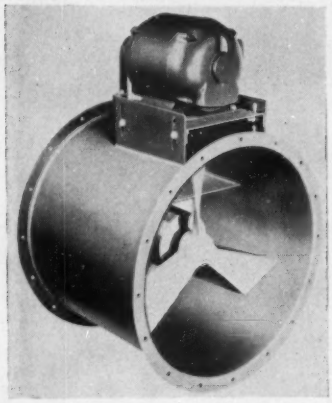
*City*_____ *Zone*_____ *State*_____

ness to laundering, chlorine, dry cleaning, perspiration, and peroxide bleach.

Courtaulds (Alabama) Inc., Mobile, Ala.

More data? Write ◂ or use card, p. 233; list J-128

Manufactured in five sizes from 16 through 36 inches is a new line of **belt-driven tubeaxial propeller fans** designed for handling corrosive ex-

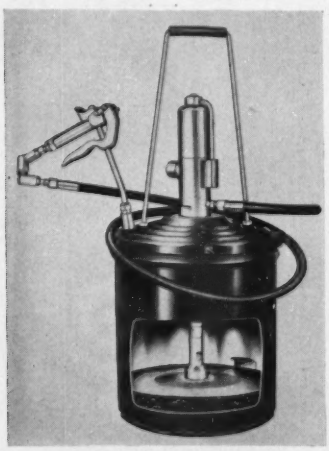


haust, high temperature, explosive fumes and similar difficult air-moving applications. Designated Type BT, they have delivery ratings to 26,000 cfm.

Robbins & Myers, Inc., Springfield, Ohio.

More data? Write ◂ or use card, p. 233; list J-129

Six man-hours for every 25-lb pail of lubricant applied can be saved by using a new **portable air-operated lubricant gun** which pumps directly



from original 25- or 35-lb pails. Called Model 711-H, it delivers up to 14½ oz lubricant per minute through six-foot high pressure hose. Prevents waste and contamination of lubricant.

Alemite Div. of Stewart-Warner Corp., 1826 Diversay Parkway, Chicago 14, Ill.

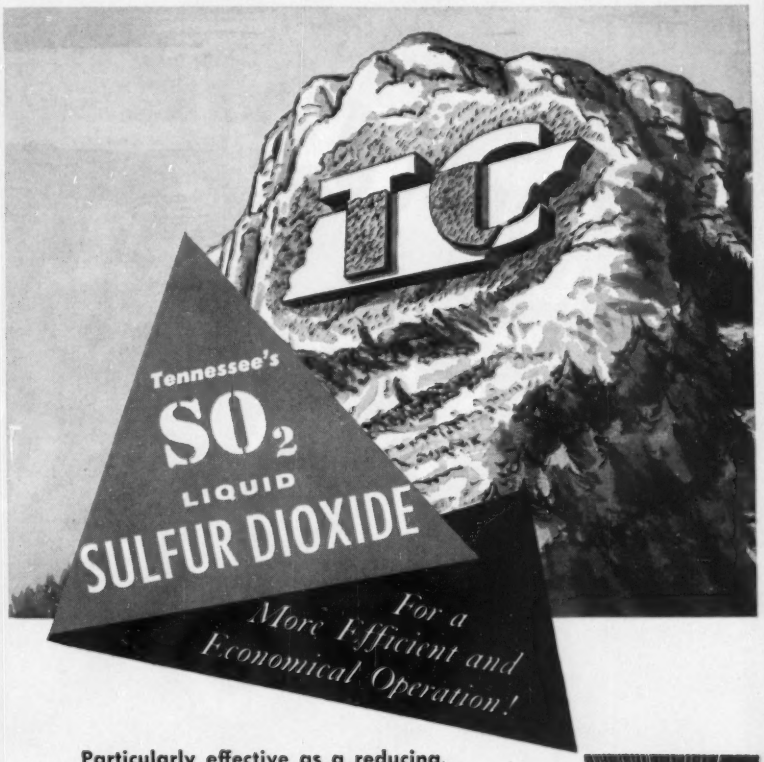
More data? Write ◂ or use card, p. 233; list J-130

A new series of **ball bearings designed for medium duty service** conditions is available. Designated as Dodge SCM ball bearings, they embody all of the features and dependability of Dodge SC ball bearings. In addition, the SCM bearings provide more load carrying capacity and are available in larger shaft sizes. Line includes both ball bearing pillow blocks and ball bearing flange cartridge mounts.

Dodge Mfg. Corp., Mishawaka, Ind.

More data? Write ◂ or use card, p. 233; list J-131

Just announced was a new **chemical and corrosion resistant neoprene coating** which can be applied to floors, walls, tanks, ducts, and processing equipment directly as received by the conventional methods of brush, roller, spray or dip. Two coats will in most cases give adequate protection against fumes, vapors, and spillage of acids and alkalis. Provides surface that is tough, resilient, abrasion - resistant, non - oxidizing, cushioning, and extremely long wearing. On floors it deadens the sounds



Particularly effective as a reducing, bleaching antichlor or neutralizing agent of highest quality.

Tennessee's Liquid Sulfur Dioxide is practically 100% pure . . . Easy to transport, store and handle.

This versatile chemical of so many uses can, perhaps, effect a more efficient operation in your particular processing.

We solicit the opportunity of discussing this with you.

AVAILABLE IN:
Cylinders, Ton Drums, Tank Trucks and Tank Cars

TENNESSEE TC TENNESSEE CORPORATION **CORPORATION**

617-629 Grant Building, Atlanta, Georgia

Picker Overhauling Is Simple When You Depend On . . .

Aldrich Repair Service

We furnish skilled men for reworking pickers, and can deliver to these men any needed parts within 24 hours in most southern states, and within 48 hours to almost any cotton mill in the United States. This makes thorough overhauling a simple matter. Anything needed for a good job can be had at once, while the machine is down for repairs.

If you do your own overhauling, this speedy delivery service is just as valuable. You don't have to wait for repair parts — they are there when you want them.

We manufacture and install complete blending, opening, and picking systems for cotton and synthetics, and cleaning systems for cotton.

Aldrich Machine Works

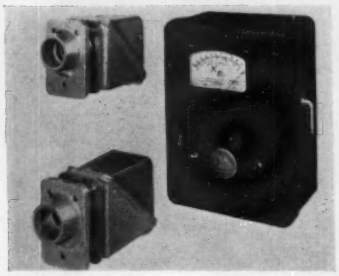
Greenwood, South Carolina

of traffic. With grit it provides a non-skid surface. Produced in black, gray, red, green, and aluminum colors.

Saran Protective Coatings Co., Ferndale (Detroit) 20, Mich.

More data? Write ◄ or use card, p. 233; list J-132

The Photoswitch **Densitometer,** Set P4S, is a ready-to-use photoelectric control which helps eliminate the smoke nuisance in smoke stacks and



ventilating ducts, monitors light transmission or optical density of liquids in chemical processing lines, and regulates turbidity in water and sewage treatments.

Photoswitch Div., Electronics Corp. of America, 77 Broadway, Cambridge 42, Mass.

More data? Write ◄ or use card, p. 233; list J-133

Increase Lap Weight with 4" Pintle for Lap Winders

With a small investment in new parts, Saco-Lowell lap winders built since 1937 can be converted to the use of 4" pintles which are suitable for processing stock into heavier laps on light weight laminated lap spools.

The new pintle assembly is not only a more rugged unit than the older 2" pintle, but it also (1) has larger diameter discs which at the same time increase the full package potential and reduce direct labor costs, (2) provides better grease retention in the bearings, and (3) lengthens the use life of spools.

Saco-Lowell Shops, 60 Batterymarch St., Boston 10, Mass.

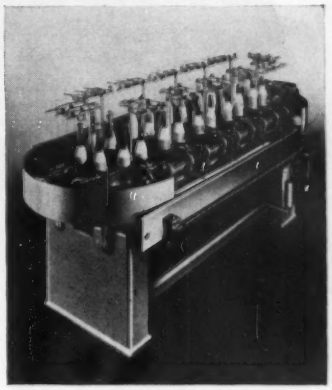
More data? Write ◄ or use card, p. 233; list J-134

Outerwear Knitter Offers Advantages of Both Circular and Flat Machines

A new circular knitting machine for outerwear combines the production advantages of circular knitting machines with the nice appearance of fabrics made on flat knitting machines.

Equipped with two sets of needle beds each 60" wide, with high and low butt needles, this machine produces in 10 gauge approximately 140 yards of ribbing in 8 hours when utilizing the full width of the machine, but it is also possible to manufacture fabrics narrower than the working width of the machine.

On the Automat Type CFD, 12 locks continuously run in a circle around



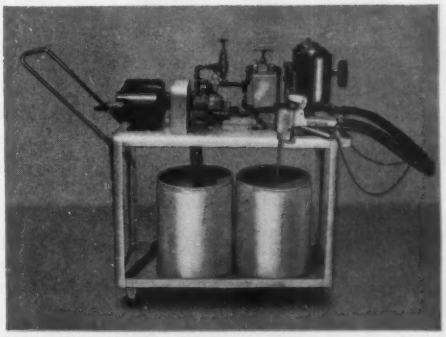
It's Here! **The New**

Wicaco Spindle Oiling Machine

The all-new Wicaco Spindle Oiling Machine fulfils the popular demand for a more efficient and economical spindle oiler.

IT HAS THESE OUTSTANDING FEATURES

- ★ Smaller than previous models—it can go anywhere a man can walk.
- ★ Light weight—it can be pulled along narrow aisles easily.
- ★ Economical—lower first cost and inexpensive operation.
- ★ New style, improved filter system cleans old oil for reuse and longer life.
- ★ Greater efficiency—operates with as little as one gallon of oil, filters the old oil and returns it for further use, or flushes out the old oil and replaces it with all new oil.
- ★ Complete flexibility—different oils may be used interchangeably by simply switching oil containers.
- ★ New filter gauge tells when filters need changing.
- ★ Relief valve permits full control of pressure from 0 to 35 lbs.

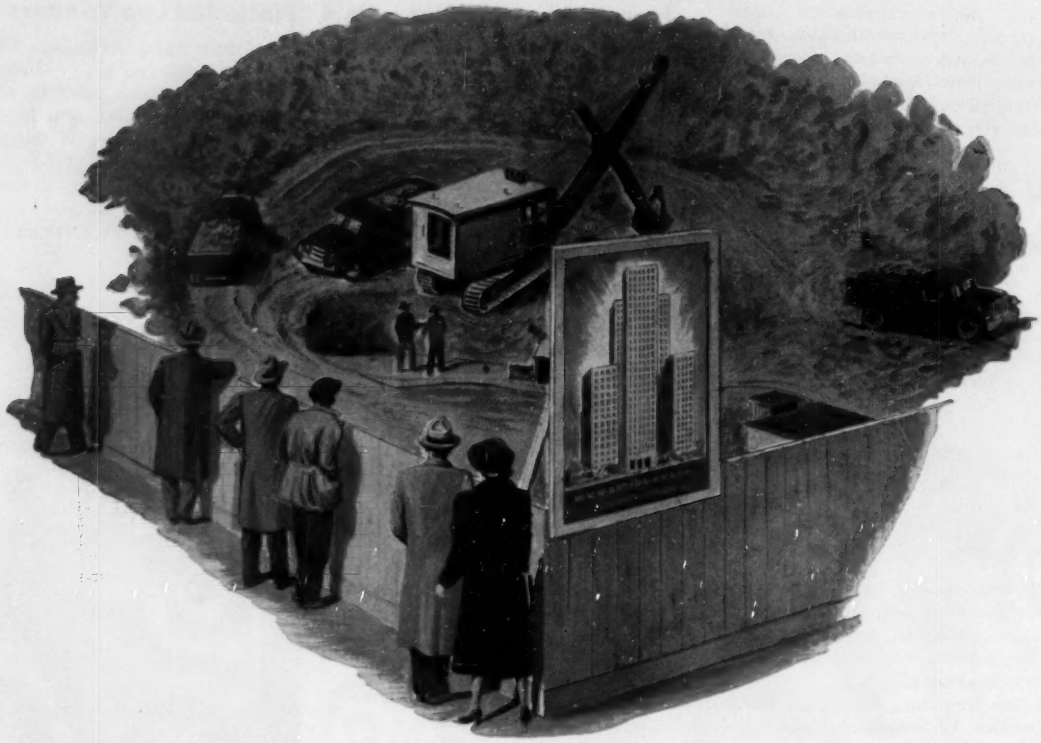


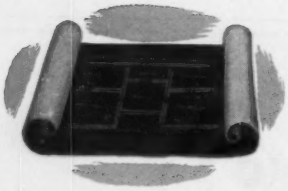
ORDER ONE TODAY
AND SEE HOW IT WILL IMPROVE
***YOUR* MAINTENANCE OPERATION**

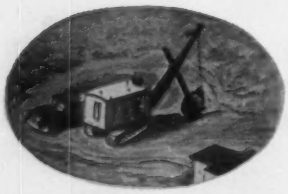
WICACO MACHINE CORPORATION

Designers and Manufacturers of Precision Machinery and Parts Since 1868

4800 Stenton Avenue, Wayne Junction, Philadelphia 44, Pa.







Foundation for a Fine Finish

UNLIKE MOST THINGS, a building must go deep down before it can go up!

... and the reason is, of course, that it's upon the *foundation* that the safety of the building's fine "finish" depends ... a foundation planned for in advance ... one designed to do the job *best*.

And this same "factor of safety" can be applied, with profit, in other ways. In your bleaching and dyeing operations, as an example, we know of no better way to plan for a fine finish than to use a de-sizing agent designed to do *that* job best: *Diastafor*.

For Diastafor de-sizing agent *works*, no matter what *your* working conditions—whether with various lots, with variations in water or sizing formulas—whether with cottons, rayons or mixed goods. What's more, you will find it works in an unusually wide range of temperatures and pH, a range sure to satisfy your every de-sizing need.

For finishing with ease, speed and economy in either the continuous or batch process—try all-purpose Diastafor! It's available in three types, L, L_2 or D. Remember: this is the product that has been building its fine reputation for more than 44 years!

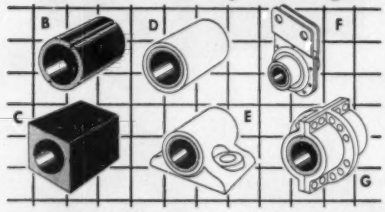
For further information, feel free to write us ... we're here to serve you. Standard Brands Incorporated, *Diastafor Department*, 595 Madison Avenue, New York 22, N. Y.

DIASTAFOR

A TRADE MARK OF STANDARD BRANDS INCORPORATED

GRAPHALLOY
BUSHINGS
OPERATE DRY or SUBMERGED

The IDEAL textile machinery bearings!



...self lubricating
...contain NO OIL

The GRAPHALLOY process was patented 40 years ago and the name GRAPHALLOY has been our copyrighted trademark since that time. While this company has been selling GRAPHALLOY for the past 40 years, recent developments have added materially to its properties.

... use GRAPHALLOY BUSHINGS for TROUBLE-FREE OPERATION in the following TEXTILE equipment!

BLEACHING	DYEING	NEUTRALIZING	SOAPING
CARBONIZING	EXPANDING	PICKING	SPINNING
CONDITIONING	FINISHING	PRESSING	STEEPING
CRABBING	FULLING	SCOURING	WASHING
DECATING	GYRATING	SINGEING	WEAVING
DRYING	MERCERIZING	SLASHING	WINDING

GRAPHALLOY BUSHINGS cut TEXTILE manufacturing costs in these ways:

- ELIMINATE OIL and OILING SCHEDULES
- PREVENT OIL AND GREASE SPOTS ON FABRICS
- AVOID WEAR ON SHAFT AND BUSHING FROM LINT AND DUST GATHERED BY OIL FILM
- OPERATE WITHOUT ATTENTION IN "INACCESSIBLE" LOCATIONS
- REDUCE FIRE HAZARD
- HAVE LONG LIFE
- EXCEL WHEN SUBMERGED...AS IN WASHING, BLEACHING, DYEING, CARBONIZING
- WITHSTAND HIGH TEMPERATURE (to 700°F) AS IN DRYERS, OVENS, MANGLES, and in ROTARY STEAM JOINTS

Use our 40 years of bearing experience

GRAPHITE METALLIZING CORPORATION
1069 NEPPERHAN AVE. • Yonkers, New York
Please send GRAPHALLOY BUSHING literature and Inquiry Form 107A

NAME & TITLE
COMPANY
STREET
CITY ZONE STATE

two pairs of needle beds placed one behind the other. The threads are cut at the end of each needle bed by a cutting device so that two separate pieces of fabric are produced simultaneously in exactly the widths desired for the article which is to be manufactured. Of course, every piece of fabric can be knitted with starting welt (equivalent to automatic transfer), racking and 2/2 rib, exactly as on flat knitting machines.

The fabric produced by the machine is exceptionally smooth and uniform because the locks run in only one direction. As each lock can be regulated independently and as in addition needles with long and short butts are used, cardigan patterns can be made automatically.

In addition the machine is equipped with a device for controlling the cams as well as the size of the loops for three different densities of the fabrics; it also actuates the racking over one needle of each needle bed pair for starting the fabric and for making rack patterns.

Tricoma, Inc., 100 West 42nd St., New York 36, N. Y.

More data? Write or use card, p. 233; list J-135

Five New Colors of Metallic Yarn

Five new colors—scarlet, lacquer orange, royal purple, Bristol blue, and green-gold—are being added for 1956 to the Lurex non-tarnishing metallic yarn lines.

The scarlet is a true red-red; the new gold is a variation of the antique and Aztec golds and has the green tint expected to become important in video and motion picture color reproduction. The Bristol blue has strong potential use in both fashion and home-furnishings fields.

Stability of the new colors has been tested and established at better than 80 hours in the Fade-Ometer, standard for all Lurex color.

The Dobeckmun Co., Cleveland, Ohio.

More data? Write or use card, p. 233; list J-136

Waste Disposal Aid

A new group of synthetic polymers has the ability to agglomerate finely-divided solids in liquid suspensions, with resultant improvement in settling and filtration rates.

Aerofloc Reagents are large, complex molecules which, when added to aqueous suspensions, bond together

STEEL FOR THE TEXTILE FIELD

- STAINLESS STEELS
- CARBON STEEL BARS AND SHAPES
- PLATES AND SHEETS
- COLD-FINISHED SHAFTING
- STRUCTURALS

DIRECT FROM WAREHOUSE TO YOU

One of the South's largest and most complete varieties of steel warehouse products is your assurance of immediate shipment. Whether your order is for one piece or a carload, it will get the same rapid handling—24- to 48-hour delivery throughout the South. Next time call Atlantic for Steel and see what service *really* means.

FREE!
COMPLETE HANDBOOK
Latest stock and weight handbook.
Call or write for your free copy.

AMERICAN STEEL WAREHOUSE ASSOCIATION
BETTER DISTRIBUTION

WAREHOUSE DIVISION
Atlantic Steel Company
575 14th St. N.W., Atlanta 1, Georgia, EMerson-3451

5 Reasons you should choose VV

1 MODERN MACHINES. Van Vlaanderen Machines are up-to-date. Every machine is periodically redesigned to take advantage of the latest advances in processing technology as well as machine design improvement. When you select Van Vlaanderen you need not worry about early obsolescence — there is no "old-fashioned" equipment in our line.

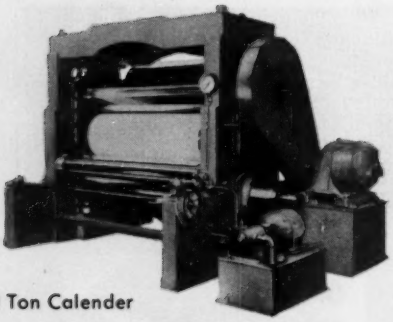
2 A COMPLETE LINE. Only Van Vlaanderen offers you such a complete line of quality equipment for dyeing and finishing rayon, acetate and synthetic broadgoods, including their blends. From preparatory equipment to packaging machinery, there is a V. V. Machine that meets every need. Whether you require a single machine or a complete plant our engineers will be glad to work with you in specifying the best equipment for the job.

3 SUPERIOR DESIGN. We believe our engineering and design staff is second to none. V. V. has introduced many important improvements in processing machine design. The exclusive patented features of V. V. Machines contribute to their consistently better production, longer service and reduced down time. The 888 Jig, for example, has a special transmission using spur and miter gears for superior power transmission with less wear. The entire transmission may be replaced by a spare in less than 20 minutes.

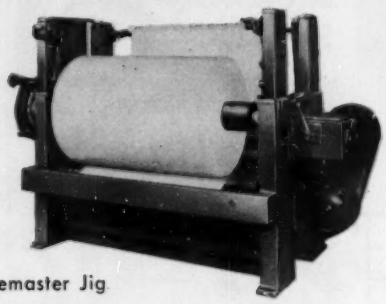
4 SUPERIOR CONSTRUCTION. An important factor in the long life and low maintenance costs of V. V. equipment is the high quality construction methods used. Anti-friction bearings assure smooth, trouble-free operation. Massive cast iron frames and girts reduce destructive vibration and retain permanent alingment. Stainless-steel, bronze and special alloy steels control costly corrosion and wear. V. V. Machines are super powered. Motors specified are adequate for the severest use. V. V. Machines are built to last.

5 FIFTY YEARS EXPERIENCE. Over a half century of successful service to the industry, we think, is a pretty good recommendation in itself. Van Vlaanderen began building machines for silk processing in 1902 and has led in machine design ever since.

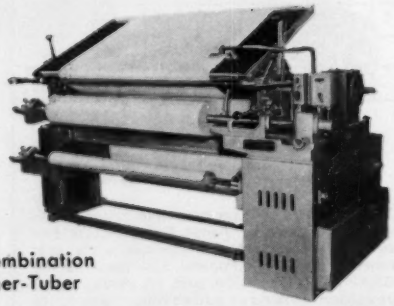
If you have a special processing problem, we will be glad to put the facilities of our engineering department at your service. We have helped many others — why not you?



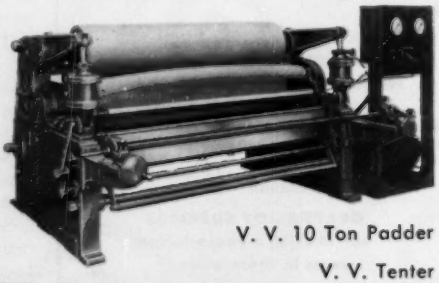
V. V. 80 Ton Calender



V. V. Dyemaster Jig

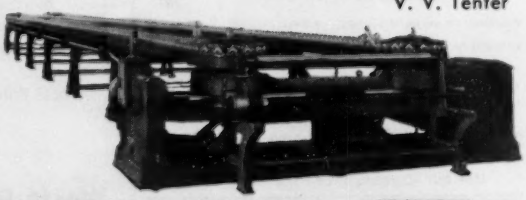


V. V. Combination Examiner-Tuber



V. V. 10 Ton Padder

V. V. Tenter



VAN VLAANDEREN

MACHINE COMPANY

370 Straight Street • Paterson 3, New Jersey

In the South — Parrott and Ballentine • 610 South Carolina National Bank Building • Greenville, South Carolina

WORLD'S LARGEST MANUFACTURER OF MACHINES FOR PROCESSING MODERN FABRICS

the individual fine solid particles into flocs. These flocs settle more rapidly than unconsolidated particles, leaving a clarified supernatant suitable for re-use or for discarding without creating a pollution problem. Where suspended solids are removed by filtration, Aerofloc Reagents have improved filtration rates as much as 150% on various types of materials.

Plant scale testing at a knitting mill showed that only 4 parts per million of Aerofloc Reagent caused rapid settling of a textile waste material and doubled the effective capacity of the waste treatment plant, since the settling tank could be discharged more quickly.

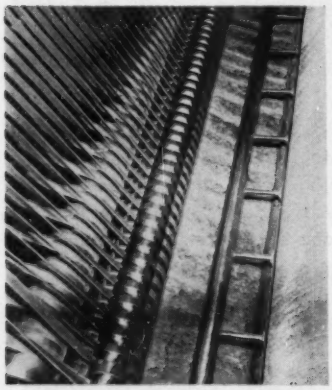
American Cyanamid Company, 30 Rockefeller Plaza, New York 20, N. Y.

More data? Write ◂ or use card, p. 233; list J-137

Condenser Tape Needs No Oiling

"Supr-O-Tape," a new condenser tape of high quality, features long life without stretching and does not need oiling, yet there is no surface cracking. It will hold its square edges indefinitely.

A uniform amount of stock is carried at all times, and there is no sagging or dropping of ends. The product is ideal as a continuous tape because

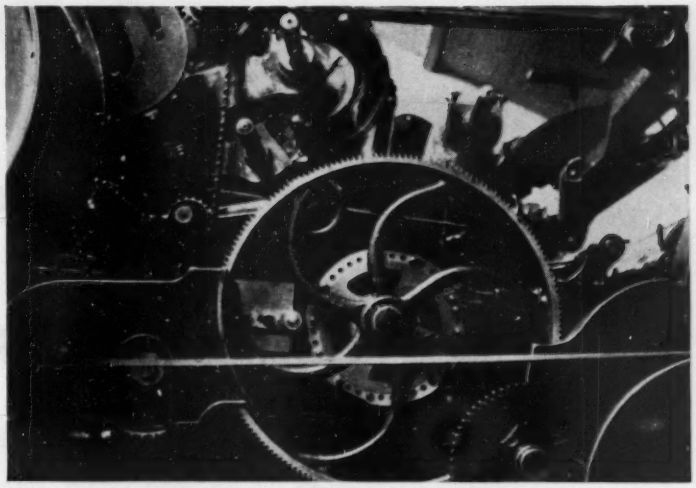


splices or plies will not open regardless of the emulsions used, and the belt hooks hold rigidly.

Readily cleaned by any detergent, by buffing, or by wipe roll covered scavenger roll, this tape can be supplied in any width; endless or continuous in any length.

Benjamin Booth Co., Allegheny Ave. and Janney St., Philadelphia 34, Pa.

More data? Write ◂ or use card, p. 233; list J-138



Close-up of wool card showing Model A-6 flake yarn attachment.

Two Flake Yarn Attachments for Woolen Cards

For the manufacture of flake yarns containing flakes of the same material from which the basic yarn is made, the Model A-6 (patent pending) flake yarn attachment for woolen cards is available.

By periodically changing the distance between the cylinder and doffer, an alternately thick and thin card web is produced. Movement of the doffer is caused by shift cams which are attached to the doffer

HAE-KE 151-55

Ends costly snags, tears, rust

KEMCO

ENDS MAINTENANCE COST IN WET MATERIAL HANDLING

• End the painting, repair and other maintenance costs that are a constant drain on profits. Save by investing in *stainless steel* tank trucks. Mills everywhere prove day after day that YOU TOO, can save money, speed production, obtain a higher output of first-quality work. With thirty years specialized experience in designing material handling equipment for the textile industry, we'll show you how and why, with a modest initial investment, you'll save by ending snags, tears, rust, and other spoilage.

These trucks quickly save their cost, permanently increase operating efficiency. Worth investigating. Write immediately for complete details.

KENNETT EQUIPMENT AND MACHINERY COMPANY
Kennett Square
Pennsylvania, U. S. A.

MATERIALS HANDLING SPECIALTIES

THE DIFFERENCE between various styles of travelers made for lubricated vertical rings, may be hard to see at a glance. But it's a very important difference.

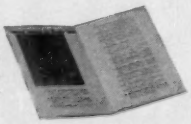
Unless the traveler design is exactly right for the ring, much of the advantage of lubrication will be lost. Also, unless the design is exactly right for the yarn being processed, ends-down will cut production, and quality will suffer.

Whether you are running novelties like boucles, poodles, or seed yarns, — or twisting the heavier stocks normally processed on lubricated rings, Victor has the right vertical travelers to keep your production trouble-free.

You'll find it well worthwhile to check over your operations with a Victor Service Engineer. He can often show you that "headaches" you've taken for granted can be readily cured. Write, wire, or phone the nearest Victor office.

VICTOR VERTICAL TRAVELERS

representative of the styles commonly used on lubricated rings are described in this folder, with useful information on selection. Ask for Form VTN.



Keep a Step ahead with

VICTOR Ring Travelers

VICTOR RING TRAVELER COMPANY

PROVIDENCE, R. I. . . 20 Mathewson Street . . . . . Tel. DExter 1-0737

GASTONIA, N. C. . . . 914-916 East Franklin Ave. . . Tel. UNiversity 5-0891

shaft. These shift cams can be adjusted so that various sizes and lengths of flakes may be produced. The movement of the cylinder can be accurately adjusted by means of set screws.

If flakes are not required, the device can be easily disconnected so that conventional yarn can be manufactured. In other words, it is not necessary to remove the attachment from the card, and it does not interfere with the stripping and grinding operations.

For the production of flake yarns containing flakes of a different fiber or color than that from which the basic yarn is made, the Universal Flake Yarn Device Model A/B-6 (patent pending) is available. With it flakes can be produced in various sequences so that two-colored flake yarns can be manufactured.

The attachment consists of a roll for unwinding the lap from which the flakes are made, one pair of delivery rolls, and one flake roll which serves to tear off pieces from the lap which is guided by the delivery rolls. The flake roll brushes the strip of the lap on the doffer.

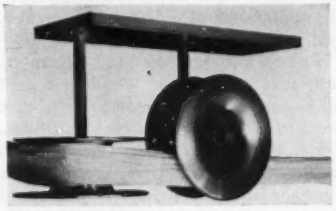
The flakes can be altered with respect to length, thickness, and distance between each other. The sequence of the flakes and distance between them can be made regular or irregular as required.

The brushing-in of the strip of lap is directed by the same shift cam which regulates the swinging movement of the doffer in Model A-6 described previously. The flake roll brushes the flake material into the doffer when it is at the greatest distance from the cylinder, preventing blending of the flake material with the basic fiber.

Stellite American Corp., 60 East 42nd St., New York 17, N. Y.

More data? Write ◂ or use card, p. 233; list J-139

Free Wheeling Poteyes Facilitate Fabric Guiding



Stainless steel, free wheeling poteyes that eliminate the short turning radii of conventional arrangements and make it possible to pull fabrics for long distances without using assist powered rolls are now available.

The new poteyes are 14" in diameter, have a 6" hub, a 6" span between flanges, and are ball-bearing mounted. They are spun from stainless steel to eliminate roughness and joints on the contact surface that would increase tension on the fabric.

The virtually frictionless operation of the new poteyes makes it possible to guide fabric through even right angle turns without generating twist in the rope. Even synthetic fabrics may be pulled over them without making rub marks or hard creases.

Mount Hope Machinery Co., Taunton, Mass.

More data? Write ◂ or use card, p. 233; list J-140

Blue Vat Dye Makes Denims Colorfast

A blue vat dye, called "Denivat," has been developed to resist fading from wearing and washing in denim garments. Denivat utilizes the vat-dyeing process to penetrate and dye

THIS BOBBIN
Saves
MONEY
TIME
TROUBLE

Uniquely crimped, built-in brass bushings prevent drag and pull, even at high speeds. Reamed core assures free running; enamel cure prevents swelling. Longer life!

CONTACT YOUR REPRESENTATIVE

Vermont SPOOLS AND BOBBINS SINCE 1906
234 S. CHAMPLAIN ST.
BURLINGTON, VT.

G-C SAYS:

BEAT THE HEAT OF FRICTION WITH G-C LUBRICANTS!

"FORMERLY REPLACED 100 BEARINGS PER WEEK . . . NOW REPLACE 12!!"

One of the largest wet processing plants (name on request) in the nation reports that Ben-Boy 55-B non-melting lubricant has reduced bearing replacement from 100 per week to 12 per week! That's a *big* saving! Georgia-Carolina can save your mill money, too! Write for details and samples.

- BEN BOY High Heat Lubricant
- G-C NON-MELTING OIL for comb Boxes, Top Rolls and General Lubrication.
- G-C NON-MELTING TWISTER RING LUBRICANT
- WHITE STAR SPINDLE OIL
- KALOOM OIL NUMBER 9
- G-C NON-MELTING OILER

GEORGIA CAROLINA OIL COMPANY
MACON G-C GEORGIA

Problems in Producing 'Wash N' Wear' Fabrics

by JAMES M. MYERS

Manager, Salisbury, N. C., Office

When we use the term, "Wash N' Wear", I am reminded of the question, "What is the Truth"? What is "Wash N' Wear"? Is the term just another advertising phrase to sell a lot of goods, or is this one the real McCoy?

There are many current problems facing us in the turning out of all cotton fabrics that are actually "Wash N' Wear". We will name a few of these:

Not all fabrics, due to their construction, yarn size, twist factor, type of cotton, etc., lend themselves to this type of finishing operation. The job finisher cannot please his customers across the board.

There is a serious sewing problem, because a crease resistance of over 3.4x3.4 causes seams to pucker, bulge, and look untidy in general in the finished garments. A fabric to be truly "Wash N' Wear" must be very resistant to crushing, and permanently so. It must also have these qualities while in the wet state.

There is a serious degradation problem, because very few chemicals on the market today will do this job correctly without greatly damaging the fabric strength-wise.

Plants must have the equipment, trained personnel and technical know-how to control this finishing operation. The finishing job is one of high skills in the application of complex resins, catalysts, plasticizers, softeners, etc.

The cost factor will play an important part in finishing "Wash N' Wear" all cotton fabrics. A good job will cost more to produce than current resin finishes. With competition from abroad increasing steadily, there is a question whether cheap fabrics, like 80 x 80 prints, will bear this added cost. We feel it will, although others in the industry say it will not.

The worst problem I saved for last. Many "Wash N'Wear" fabrics are on the market today that are no better than a fair resin job. What effect this will have on the long-range "Wash N' Wear" picture we do not know. Our guess is that it will not be good.

Standard Chemical Products has the equipment, the chemicals and the technical know-how to do a proper job. Samples and technical information will be gladly furnished by contacting our Sales Office in Hoboken, N. J., or Charlotte, N. C.

Standafin 77 for Whiteness

If you are looking for the whitest possible finish on synthetics, one that will remain white indefinitely during mill or shelf storage, then Standafin 77 is the product to use. Write or call today for complete information on this durable, non-irritation finish.

Meet Us at Convention

You probably have some ideas on "Wash N' Wear" problems that Jim Myers hasn't covered on this page. Let's discuss them the next time we meet; probably at the national AATCC convention in Atlantic City, September 21-24. Look us up, we'll be glad to see you.

Standardgrams

Stanset D 40's Crease Resisting Quality Lauded

We have received many enthusiastic and flattering reports from customers on the low chlorine retention and high crease resistant properties of our new chemical reactor resin, Stanset D 40.

A modified melamine type resin, Stanset D 40 requires slightly more catalyst than the acid type; 12-15% Stanset D 40 (on weight of resin mix) will give crease resistance around 3.2 x 3.1, and the chlorine degradation can be maintained below 25%. We recommend 0.5-1.25% of Catalyst 100 for Stanset D 40 and a curing temperature of from 310 F.-320 F. for seventy seconds.

Fabrics finished with Stanset D 40 will hydrolize only slightly when subjected to severe alkali washings. Fabrics treated with Stanset D 40 and cured to a good crease angle are highly resistant to yellowing when subjected to hot chlorine washes.

A combination of 5-8% Stanset D 40 and 10% Stanset L C N has been found to be very good for low chlorine retention on dress fabrics. When Stanset D 40, Stanset L C N and Stanset S-100 are applied to fabrics that have zero chlorine retention, are properly scoured free from alkali, are cured to a reasonably good crease angle, are properly washed and then tested by the procedure set forth by the AATCC, the chlorine degradation will be from 0-10%.

Physically, Stanset D 40 is an essentially colorless liquid with a weak aldehyde odor. Other typical characteristics are:

pH : 9.0 – 9.6
Specific Gravity : 1.158 – 1.160
Stability : 6 months, normal storage
Solubility in water : miscible in all proportions with hot or cold water.

If you have not already received our technical bulletin on Stanset D 40 drop us a line, or call. We will be happy to send one to you. It contains much more information than the few facts presented here.

S CP INC

STANDARD CHEMICAL PRODUCTS, Inc.

HOBOKEN, NEW JERSEY · CHARLOTTE, NORTH CAROLINA

CHATTANOOGA, TENN. | PATERSON, N. J. | SWANSEA, MASS. | SALISBURY, N. C.
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Anderson Shields are dependable protection against chipping, splitting, and breaking of spools, bobbins, and paper caps. Even the most minute details are carefully worked out to make Anderson the highest in precision, the smoothest in finish, the best in performance. The Anderson Emblem is your assurance of the finest shields you can buy.

Insist on Anderson when you order metal shields regardless of when you buy spools and bobbins.

TEXTILE SHIELD CO., INC.

J. N. ANDERSON, Treasurer

LAWRENCE, MASS., U. S. A.

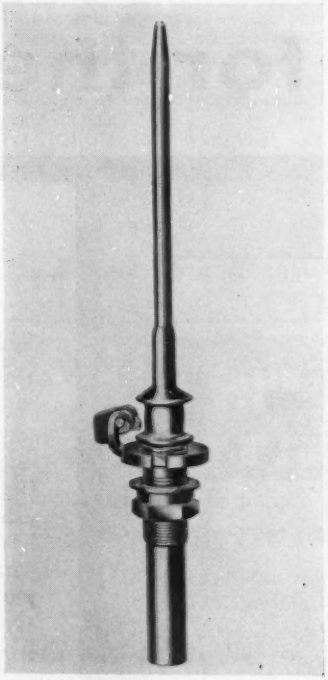
all the fibers of the yarn, leaving no white centers of cores to cause "white knees."

Seats, edges, seams, knees, and other parts of the garments exposed to the most severe wearing and washing retain a deep rich blue tone throughout. Also, the garment can be laundered with other articles in the family wash.

Southern Dyestuff Corp., Charlotte, N. C.

More data? Write ◂ or use card, p. 233; list J-141

Reduce Vibration with this Top Drive Filling Spindle



A recently developed filling spindle features a hardened blade with a tapered seat that drives the bobbin from the top. Bobbin height is uniform, drive is positive, and bobbins are easily doffed.

As with other Marquette roller bearing spindles, this has the exclusive, full-floating, footstep bearing. Vibration is minimized or eliminated, and speeds can be greatly increased if other conditions permit. It is necessary to change oil only once a year. The spindle will not throw oil, and therefore the yarn remains clean.

Marquette Metal Products Co., 1145 Gatewood Drive, Cleveland 10, Ohio.

More data? Write ◂ or use card, p. 233; list J-142

CONTINUOUS DYEING, FINISHING EQUIPMENT

BACKED BY 85 YEARS EXPERIENCE

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Continuous Dyeing, Scouring and Fixing Equipment as well as Padding Mangles of our latest design and construction. Both of the units turn out the fabrics with excellent fastness properties throughout (black shades included).

Used in tandem with a Drying-and Finishing Machine the fabrics are dyed and finished continuously.

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Four Color Printing Machines for ribbons and fabric labels.

NEW!

Complete machines suitable for the application of foam rubber coatings to webbings and tapes.

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Calenders with 2 and 4 bowls
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Single color Printing Machines

All machines intended for the textile narrow fabric and elastic broadloom fabric trade (wide woven elastic webs for corsets, girdles and brassiers up to a *width of approx. 2 yards.)*

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My Name_____

Company Name_____

Street Address_____

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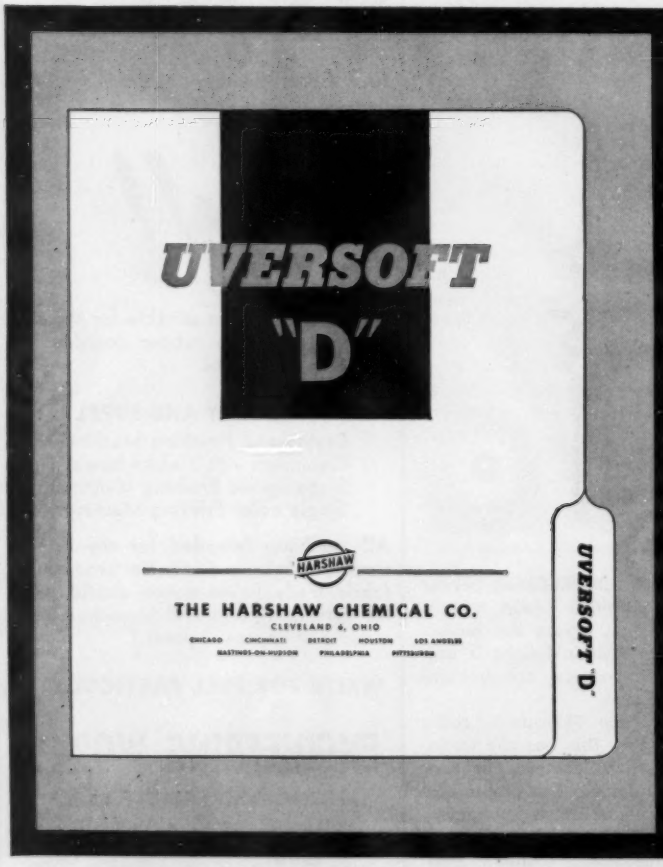
yours for the asking



Imparts Soft Hand With Little Reduction In Moisture Absorbency

UVERSOFT "D" is a cationic surface active agent which produces a full, soft hand with little, if any, reduction in moisture absorbency of the TREATED material. It can be exhausted from a long bath, and has an excellent retention in an aqueous system. UVERSOFT "D" provides a maximum economy in application and use.

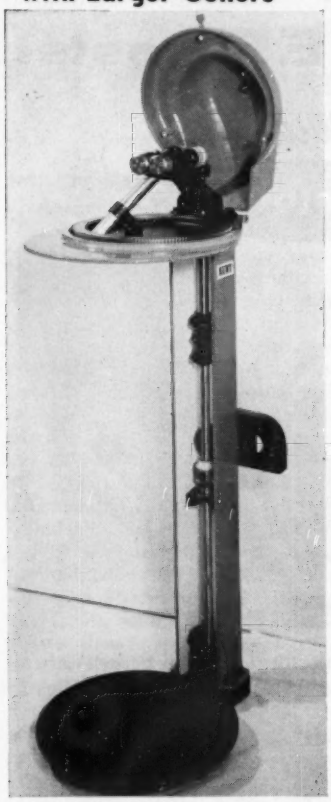
UVERSOFT "D" is an outstanding anti-static agent. It should be considered for situations where the accompanying softening action is not objectionable.

Send for folder containing complete technical information.

THE HARSHAW CHEMICAL CO.

1945 EAST 97th ST., CLEVELAND 6, OHIO

Cut Card Room Costs with Larger Coilers



Complete card coiler units that accommodate 15" x 42" or 18" x 42" cans are available in standard and de luxe models.

Features of the standard model coiler for cards are: Blue baked enamel finish; metal gearing (oil or grease lubrication); recessed type can table; adjustable stop for calender roll (optional); one-piece column (no projection on column); longer run between doffs.

The de luxe model also provides: Anti-friction bearings; sealed lubrication; nylon tube gear bearing; metal to nylon or celeron gearing; can table gear-driven (no oil reservoir needed); no oil or grease on sliver.

In addition to the card coilers, 15" x 42" coilers for existing six-, five-, and four-delivery Saco-Lowell and Whitin drawing frames are available as replacements. Advantages: Longer runs between doffs and reduced direct labor costs.

The new drawing frame coiler uses an overcenter lay in which the coiler diameter is greater than the radius of the can. The larger lay produces a more uniform pattern in the bottom of the can and eliminates tangling of sliver. It prevents hard core of sliver at the top of the can; and pyramiding

the big 4 in textile flake soaps

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Puritan ---→ medium titre

EXCELSIOR -------→ high titre

pure green olive -----→ medium titre

• More and more dyers and finishers are taking advantage of the plus values of these and other members of the Laurel Soap family (*Texsopon, Columbia, Palm-type, Arrow, and Crown*), for better scouring, fulling, and soaping off.

That clean lofty wool; those soft, perfectly fulled woolens and worsteds; clean, bright prints and vat and naphthol dyeings; completely degummed silks . . . all these can be yours with a Laurel Quality Soap.

For your convenience, you can obtain Laurel *Quality* Soaps from stocks at Philadelphia, Pa., Charlotte, N. C., Chattanooga, Tenn. and Paterson, N. J.

Laurel Quality Soaps are available in powder, bar, solid and paste (potash) forms. Ask for samples.

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For literature or further information write to The General Tire & Rubber Company, Wabash, Indiana, Department G.

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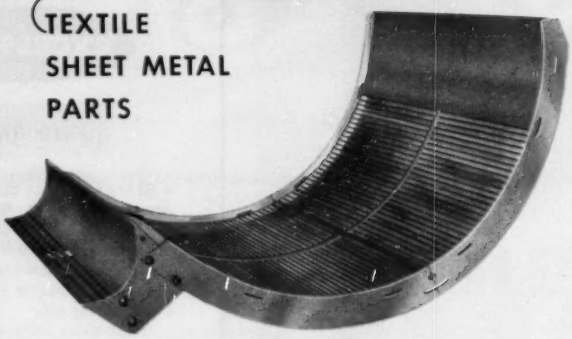

Card Screens

Standard type rib or perforated Card Screens are cut and assembled on special precision-built jigs of our own design.

Every piece of metal . . . every point of assembly is gauged with micrometer accuracy . . . checked and double-checked, followed by a thorough, scientific final inspection to assure setting points within standard tolerance.

GASTONIA Card Screens—like all other GASTONIA Products—are made of the finest materials by highly skilled workmen with precision machinery.

Many years of practical experience go into every product.

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Dynamically balanced for better performance—reduce vibration to an absolute minimum.

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Picker, Condenser and Waste Machine Screens of maximum strength and durability.

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Gastonia, North Carolina

A sheet metal works serving textile mills

in the center of the can, which results in premature doffing, is avoided.

Hunt Loom & Machine Works Division of Abney Mills, 200 Academy St., Greenville, S. C.

More data? Write ☁ or use card, p. 233; list J-143

Impart New Properties to Avcoset-Treated Fabrics

Textile finishers using the Avcoset process for finishing viscose and viscose blend fabrics can now obtain three additional desirable properties by the use of two resins, Prym N and Prym CR, in combination with the Avcoset formula: (1) durable crease resistance, (2) durable retention of appearance and other aesthetic features, and (3) the ability to vary the hand of the fabric to meet the varying specifications of garment manufacturers.

Indicative of the enhancing qualities of the new Prym-and-Avcoset formulations is the increased shrinkage control whereby a treated viscose blend will display shrinkages not greater than two per cent, even after being subjected to 25 automatic machine washings in hottest water. Resistance to chlorine degradation was even better after the last washing than after the first.

In the basic Prym-and-Avcoset formulations, Prym N is included when a firm hand is desired, while Prym CR is used to obtain a soft hand. When a shirting hand is wanted, both Pryms are included in the formulation.

Warwick Chemical Div., Sun Chemical Corp., Long Island City, N. Y.

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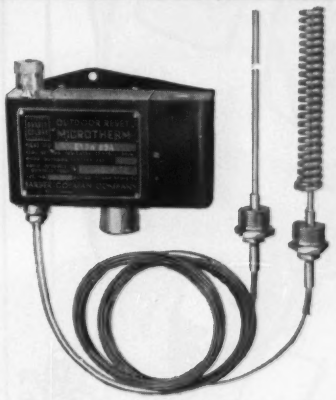
- Control motors and dampers used with Proportioning Dual Bulb supply air control are sized for individual job requirements, building type, and voltage available



- Coiled air bulb assures proper temperature of air at fan discharge

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New Books

Development of synthetic fabrics during the last 30 years is discussed in a chapter of the new 160-page illustrated book, *Everything and the Kitchen Sink,* which tells the story of industrial progress in the United States during the past century. Published by Farrar, Straus and Cudahy, Inc., New York. Price, $4.00.

Reflecting management's growing interest in long-range planning, the Controllership Foundation, Inc., research arm of the Controllers Institute of America, 1 East 42nd St., New York 17, N. Y., has issued a new 178-page indexed and annotated bibliography entitled *Management Planning and Control.* Copies are obtainable at the Foundation's headquarters, priced at $5.00 to members, $6.50 to others.

The unique position of the carbon atom in chemistry, the architecture and classification of carbon compounds, as well as special topics in organic chemistry, are explained in the completely revised and enlarged second edition of *Organic Chemistry Simplified,* by Rudolph Macy. This edition is based on the electron theory. Chemical Publishing Co., Inc., 212 Fifth Ave., New York 10, N. Y. Price, $12.00.

Primitive and medieval symbols, offering ideas for designers in the textile field, are presented in Koch's *Book of Signs,* which has been reissued by Dover Publications, Inc., 920 Broadway, New York 10, N. Y. The new paperbound edition contains the "element" motif, representing salt, lime, copper, rainfall, the sun and planets, fire, the four seasons, and similar ideas. Price, $1.00.

Of particular interest to the dyestuff manufacturer is *The Chemistry of Synthetic Dyes and Pigments,* just released by Reinhold Publishing Corp., 430 Park Ave., New York 22, N. Y. Nineteen experts on dyes and the intermediate compounds used in making them have contributed chapters to the 752-page volume. Price, $18.50.

Innumerable questions about the textile industry in India are comprehensively dealt with in the 698-page *Centenary Souvenir Volume* available from The Indian Textile Journal Ltd., "Surya Mahal," Military Square, Fort, Bombay 1, India, at $3.50. Encyclopedic in nature, the attractively illustrated volume covers each cotton mill in India, with its history, principal changes in its capital outlay and mechanical set-up, products manufactured and where it markets them; institutions in India, the United Kingdom, and the U. S. A., for education and training of technical personnel in the industry; research and other practical work done by these organizations, and other factors that have brought about the successful termination of the first one hundred years of the textile industry in India. A silk cover, several portraits in color, and feature articles in sepia tone, make the presentation an interesting souvenir volume.

A *Handbook of Textile Finishing,* by A. J. Hall, contains chapters on textile fibers, yarns and fabrics, modification of appearance, the alteration of handle, the promotion of dimensional stability, and the improvement of serviceability. 244 pages. Chemical Publishing Co., Inc., 212 Fifth Ave., New York 10, N. Y. Price, $6.75.

How and why the internal economy must be supported and protected by tariffs are explained in the book *Tariffs: The Case for Protection,* by Lewis E. Lloyd. Surveys tariff issue from its origin and pins it down to all its effects on wages, production, technical progress, and national defense. The Devin-Adair Co., 23 East 26th St., New York 10, N. Y. Price, $3.50.

For all concerned with collective bargaining is a newly published manual, *Strategy and Tactics in Labor Negotiations,* by Edward Peters of the California State Conciliation Service. Stated purpose of this 256-page book is to help management and labor eliminate strikes by miscalculations. Published by National Foremen's Institute, New London, Conn. Price, $4.50.

A report of the proceedings of the annual conference held concurrently with the Plant Maintenance & Engineering Show is contained in *Techniques of Plant Maintenance & Engineering—1955* recently published by Clapp & Poliak, Inc., 341 Madison Ave., New York 17, N. Y. (price, $7.50). Highlight of volume is text of more than 1,000 questions presented by 2,400 executives to the 56 experts who led the discussions.

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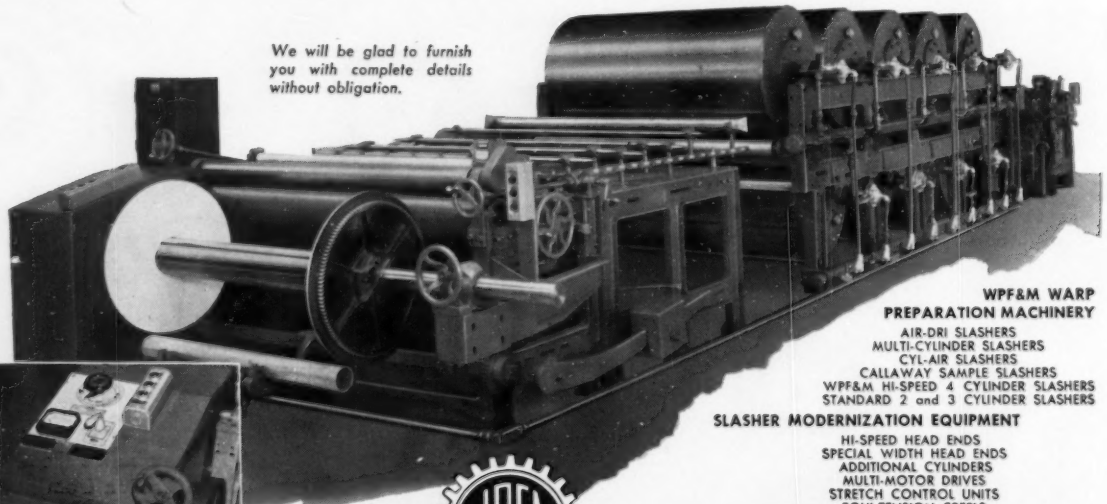

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9-1 Hydraulic Slasher Drives. Color booklet by Vickers shows how hydraulic drives provide an economical approach to improved slasher operation. Has detailed pictures and enumerates advantages. Write Vickers, Inc., 1036 Peachtree St., Atlanta, Ga.

9-2 Packaging and Carloading Guide. 44-page Guide contains usable facts that can help you lower freight bills and pilferage, reduce loss and damage claims, reduce container costs and speed packaging and shipping. Write Signode Steel Strapping Co., 2600 N. Western Ave., Chicago 47, Ill.

9-3 Motor Control For Mill Devices. 42-page booklet is designed specifically as a help in selecting electrical components for Air Conditioning, heating, ventilating, pump, and compressor equipment. Gives all motor control data needed under one cover. Write Cutler-Hammer, Inc., 361 N. 12th St., Milwaukee, Wis., requesting #EC-80.

9-4 Booklets on Cocker Custom Built Equipment. Six new bulletins available from Cocker include information on the high speed Warp Sizer, high speed Beam Warper, Cocker Creels and Tensions, Beam Back-Winders, Indigo Dyeing Ranges, Kettles, T-Boxes, etc. Write Cocker Machine & Foundry Co., Gastonia, N. C.

9-5 Program Control of Process Variables. Bulletin tells advantages of employing automatic time conditions controls in many processes and tests. Selection chart aids in choosing the right instruments for any program control application. Request Bulletin 1130, Minneapolis-Honeywell Regulator Co., Wayne and Windrim Avenues, Philadelphia 44, Pa. Direct written request required.

9-6 Controlled Humidification. Bulletin gives detailed explanation of effects of the relative humidity on profits, hygroscopic materials, health, dust and static electricity. Lists advantages of steam humidification control. Write Armstrong Machine Works, Three Rivers, Mich.

9-7 Twin-Fan Ceiling Cleaner. Bulletin tells how the Louden Twin-Fan Cleaner keeps ceilings continuously clean, continuously free of lint. Includes specifications, diagrams and pictures. Write Louden Machinery Co., 5402 Broadway, Fairfield, Iowa.

9-8 Textile Instrumentation. Folder describing full line of instruments specifically designed for textiles is now available. Brush Lapcheck, Tension Analyzer, and Brush Imperfection Counter are treated in particular. Write Brush Electronics Co., 3405 Perkins Ave., Cleveland 14, Ohio.

9-9 Textile Machines by Benninger of Switzerland. Beautiful color catalog describes Benninger machines for weaving mills and dyeing, bleaching and finishing plants. Profusely illustrated and diagramed. Write Benninger Engineering Co., Ltd., Uzwil, Switzerland.

9-10 Dodge Rolling Bearings. Booklet describe Dodge-Timken Roller Bearings, SC Ball Bearings, and the new SCM Medium Duty Ball Bearings. Contains pictures, diagrams and size and load charts. Write Dodge Mfg. Corp., Mishawaka, Indiana.

9-11 How to Select a Lift Truck. An equipment analysis guide and rating table has been introduced by Hyster for comparison and selection of fork lift trucks. Gives an excellent means for price comparison between trucks of a similar nature. Write Hyster Co., 2902 N. E. Clackamas St., Portland 8, Oregon.

9-12 Sequestering Agents. Booklets by Refined Products describe the efficient, economical, outstanding products for textile wet processing and other industrial uses. Sequestering agents assure complete control of iron, calcium and magnesium. Write Refined Products Corp., 628 Schuyler Ave., Lyndhurst, N. J.

9-13 Ribbon Calenders. Bulletin by Dickerhoff of Germany tells advantages, construction and specifications of their Ribbon Calenders for calendering, embossing, etc., of narrow fabrics. Write Herman Dickerhoff, Ltd., Wuppertal-Barmen, Western Germany.

9-14 Automatic Blending System. Dodenhoff system, called "Fiber Meter" is fully described in color booklet. Gives actual operating results, shows pictures and illustrates typical conversion of old fashioned systems. Write W. D. Dodenhoff Co., 745 Loundes Hill Road, Greenville, S. C.

9-15 Circular Knitting Machines. New brochure by Scott and Williams covers their entire line of underwear, outerwear and fabric machines manufactured by the Brinton Fabrics Machine Division. Illustration of each machine included along with resume of its uses and advantages. Write Scott and Williams, Inc., Laconia, N. H.

9-16 Complete Muller Textile Line. Booklets by Muller with English translations show Muller nappers, winders, warpers, cutting and finishing equipment, etc. Contains pictures and diagrams of each machine. Write Textile Machine Import Co., 277 North Ave., New Rochelle, N. Y., U.S.A.

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GENERAL, ECONOMICAL MANAGEMENT . . .

1. **"WHERE DID THEY HIT PAY DIRT?"** — Booklet describes how many manufacturing concerns have come South and why they found it profitable. Gives industrial advantages of the Southeast. — CENTRAL OF GEORGIA RAILWAY, Industrial Development Department, 501 Rhodes Haverty Bldg., Atlanta 3, Georgia.

15. **NEW INDUSTRIAL FIBER** — Technical bulletin now available on Fortisan-36, new industrial fiber by Celanese. Uses text, charts and diagrams to present technical properties, characteristics and recommendations for processing. — TEXTILE SALES DEPARTMENT, Celanese Corporation, Charlotte, N. C.

17. **A FAIR DAY'S PAY AND IN RETURN A FAIR DAY'S WORK** — 8-page booklet outlining the services offered to industry for the proper utilization of labor, material and equipment, and the resulting advantages for both labor and management. — AMERICAN ASSOCIATED CONSULTANTS, INC., 250 Park Ave., New York, N. Y.

22. **THE WONALANCET WAY** — Is the title of a editorial booklet published five times a year and deals with current problems which appear worthwhile at the time they are written. — WONALANCET COMPANY, 125 Burke St., Nashua, N. H.

PLANT & PLANT MAINTENANCE . . .

100. **MOTION CONTROL WITH SILENTBLOC**— Brochure describes advantages of General Tire Company's Silentbloc method of protecting delicate instruments, reducing machine vibration, etc.—THE GENERAL TIRE CO., Industrial Products Div., Akron, Ohio.

102. **"TANK TALK"** — Sixteen page booklet of illustrations showing various types of elevated steel tanks constructed and erected by manufacturers as well as stand pipes, reservoirs, storage and high pressure vessels, cylinders, along with helpful technical data. Also a list of what a few of the cotton mills, etc., said. — R. D. COLE MANUFACTURING COMPANY, Newnan, Ga.

103. **HUMIDIFICATION, EVAPORATIVE COOLING** — Bulletins available displaying AMCO automatic self-cleaning atomizers, controls, and evaporative cooling equipment. — AMERICAN MOISTENING CO., 260 W. Exchange St., Providence, R. I.

105. **CASTERS AND WHEELS** — Catalog gives complete descriptions on full line of industrial casters and wheels. Features patented "LOCKWELD" Steel Casters Without A Kingpin" both Single and Double Ball Race. — THE FAIRBANKS CO., 393 Lafayette St., New York 3, N. Y.

106. **FINNELL COMBINATION SCRUBBER-VAC** — Illustrated literature gives complete specifications and describes various methods of combination-machine-scrubbing, including method recommended for cleaning oily floors. — FINNELL SYSTEMS, INC., 1300 East St., Elkhart, Indiana.

110. **UNBRAKO STANDARDS** — Catalogue by Standard Pressed Steel Co. describes in pictures and text the company's line of Unbrako precision threaded fasteners. Several applications of each product are indicated in the drawings to suggest hundreds of others and to stimulate the imagination of design engineers. — STANDARD PRESSED STEEL CO., Jenkintown, Pa.

111. **CERTIFIED CLIMATE AIRCHANGER SYSTEM** — Bulletin describes Certified Climate Airchanger System as used with direct humidification for partial or complete air conditioning. — PARKS-CRAMER CO., Fitchburg, Mass.

112. **HARDWOOD FLOORING** — Booklet entitled "Specialist in Manufacturing of Hard Maple Flooring for textile plants." For complete information, write CONNOR LUMBER & LAND COMPANY, P. O. Box 810, Wausau, Wisconsin.

113. **COTTON MILL EQUIPMENT** — This book traces pictorially the steps in processing raw cotton into finished cloth. It shows the equipment needed for all phases of production, as well as containing a "Useful Information" section on Power Factor Correction, Lighting, Circuit Protection, etc. — WESTINGHOUSE ELECTRIC CORP., 511 Wood St., Pittsburgh 30, Pa.

114. **PENETRATING WOOD FINISH** — Bulletin gives applications, uses and application specifications of floor seals for textiles. — E. I. DU PONT DE NEMOURS & CO., INC., Finishes Division, Wilmington, Delaware.

115. **FOAMGLAS** — Illustrated brochure features information on how the use of Foamglas cellular glass insulation solved the severe insulating problems of leading users. — PITTSBURGH CORNING CORP., One Gateway Center, Pittsburgh 22, Pa.

116. **STOP CORROSION** — Details on speed Rex paint for metal wood and concrete maintenance solving condensation problems. — TRUSCON LABORATORIES, Box 69, Milwaukee Junction, P. O. Dept. T, Detroit 11, Mich.

117. **CLEANING SYSTEMS** — Booklet entitled "Certified Climate and Cleaning Systems" gives latest information on system. Products and uses fully discussed with two story layout of Certified Climate central station air conditioning system. — PARKS-CRAMER CO., Fitchburg, Mass., and Charlotte, N. C.

118. **LIQUIDATION INFORMATION** — Information available on how to profitably dispose of mill properties being liquidated. Tells how Comer will buy, sell and relocate industry in your former site. — COMER MACHINERY CO., 894 W. Peachtree St., Atlanta, Ga.

119. **FLEXLOC SELF-LOCKING NUTS** — Drawings illustrate locking action. Fasteners are unaffected by temperatures up to 550 Fahrenheit and come in regular heights and thin-nut heights. Catalog contains complete information. — STANDARD PRESSED STEEL CO., Box 582 Jenkintown, Pa.

127. **SOLENOID VALVES** — Bulletin "V" lists sizes from 1/2 inch to 3 inches; valves for normally open or closed service; stainless steel or Jenkins disc seats; three way solenoid valves, etc.; typical installations. — THE JOHNSON CORP., Three Rivers, Mich.

131. **"AIR PROCESSING"** — Set of three bulletins showing real meaning of the term, where it can be used, the requirements for a successful system, etc. — J. O. ROSS ENGINEERING CORP., 444 Madison Ave., New York 22, N. Y.

135. **COLOR CONDITIONING** — Booklet illustrated in color describes how Du Pont color conditioning puts color to work for you. Many ideas on safety brought out which color can aid. — E. I. DU PONT DE NEMOURS & CO., INC., Finishes Div., Wilmington 98, Delaware.

138. **METAL CONVEYOR BELTS** — Recent catalog describes and illustrates Ashworth's entire range of manufacture, including the new Flat Wire Belt design and application, along with their Woven Wire constructions and Positive Drive Chain Edge belts. — ASHWORTH BROS., INC., Metal Products Div., Fall River, Mass.

148. **FUNCTIONAL GLASS BLOCK DATA** — Folder shows in detail day-lighting function of Light-directing and light-diffusing Functional Glass Blocks. — PITTSBURGH CORNING CORP., 307 4th Ave., Pittsburgh 22, Pa.

150. **RIHCO HUMIDIFIERS AND COOLING SYSTEMS** — Bulletin describes new atomizers with construction lessening air consumption in humidifier systems, evaporative cooling systems. — ALDRICH MACHINE WORKS, Greenwood, S. C.

151. **INDUSTRIAL BRUSHES** — Illustrated booklet of industrial brushes featuring textile usage on shears, printing machines — also flock, raising and cylinder brushes. — M. W. JENKINS SONS, INC., 444 Pompton Ave., Cedar Grove, N. J.

153. **LAMINATED TEXTILE PLASTICS** — Booklet by Synthane Corporation shows variety, application, and advantages of laminated plastic parts and supplies for the textile industry. — SYNTHANE CORPORATION, Textile Division, Oaks, Penna.

161. **AUTOMATIC CLEANING EQUIPMENT** — Complete booklet by American MonoRail shows working details and advantages of the Tri-Rail Cleaner, a great improvement over the original unit. — AMERICAN MONORAIL CO., 13107 Athens Ave., Cleveland 7, Ohio.

162. **MODERN METHODS OF TEXTILE FLOOR MAINTENANCE** — Illustrated treatise on the history of floor cleaning in textile plants and a detailed description of new methods for reducing floor cleaning costs as well as preserving textile mill floors. — G. H. TENNANT COMPANY, 2530 N. Second St. Minneapolis 11, Minn.

173. **BLOWERS AND EXHAUSTERS** — Bulletin No. 3014-D describes types "E" and "RE" electric blowers and exhausters. Uses and full description of each with detail drawings. — BUFFALO FORGE CO., 490 Broadway, Buffalo 5, N. Y.

174. **PAINT STRIPPING BOOKLET** — Illustrated booklet providing helpful data on latest materials and methods for simplified stripping of paint. Methods described include: (1) steam gun; (2) hot flow-on; (3) cold spray; and (4) tank immersion.— OAKITE PRODUCTS, INC., 22 Thames St., New York 6, N. Y.

178. **STOKERS AND BOILERROOM EQUIPMENT** — For information on boilerroom problems, improvements and apparatus. — McBURNEY STOKER CO., 2110 Peachtree Rd., Atlanta, Georgia.

181. **AIR FILTRATION** — Bulletin 234 describes and illustrates the Auto-Airmat, which is the Automatic Dry-Type air filter. Principles of operation, performance characteristics, construction and installation fully discussed. — AMERICAN AIR FILTER COMPANY, INC., 275 Central Ave., Louisville 8, Ky.

POWER TRANSMISSION, MOTORS, BELTING, LUBRICATION . . .

201. **V-BELT DRIVE CATALOG** — This handy, pocket-sized catalog helps you make quick and easy selections of any Dayton V-Belt Drive from 1 to 1000 H.P. Contains many concise, accurate drive tables, diagrams, and other important engineering data. — DAYTON RUBBER CO., Dayton, Ohio.

203. **TREADED LEATHER BELTING** — This 16 page booklet describes Houghton's line of patented, specially treaded leather belting for all types of power transmission. Booklet includes valuable engineering and maintenance section. — E. F. HOUGHTON & CO., Philadelphia, Pa.

208. **CUTLER-HAMMER MOTOR CONTROL** — Booklets describe the combination starters for the textile industry, for roving frames and spinning frames, loom switch and Cutler-Hammer Motor Control for textile cards. — CUTLER-HAMMER, 315 N. 12th St., Milwaukee, Wisconsin.

209. **STEEL PULLEYS** — Pictorial review of American Steel Pulleys, their manufacturing processes and some of their end uses. Textile pulleys are featured. — AMERICAN PULLEY CO., 4200 Wissahickon Ave., Philadelphia 29, Pa.

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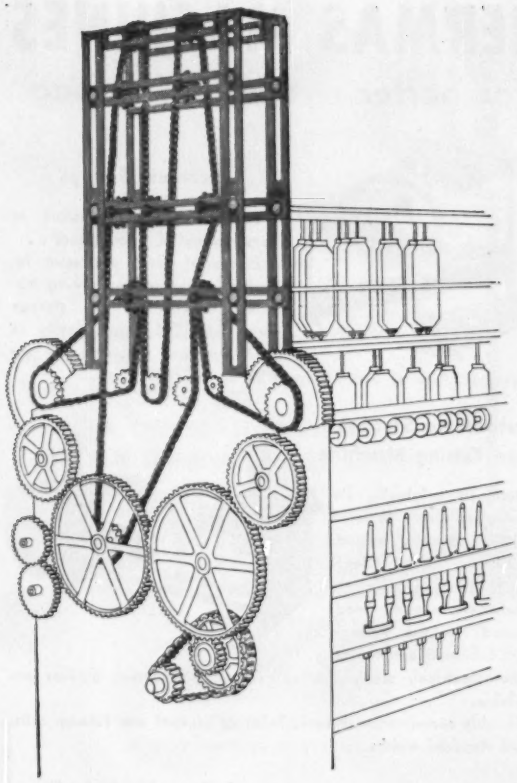

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212. GATES TEXTILE ACCESSORIES — Handy pocket-size Catalog BHM-7, fully illustrated, gives specifications of Gates textile accessories including pickers, lug straps, check straps, cone belts, evener belts, harness straps, take-up roll covering, and others. — THE GATES RUBBER COMPANY, 1061 Broadway, Denver 17, Colo.

215. LUBRICATION OF ELECTRIC MOTORS — Illustrated bulletin on lubricating and cleaning ball and roller bearings on electric motors. — NEW YORK & NEW JERSEY LUBRICANT COMPANY, 292 Madison Ave., New York 17, N. Y.

216. LUBRICATION CHART—Wall chart contains lubrication recommendations for many industrial needs. Chart covers applications such as hydraulic systems, spindles, air compressors, reduction gears, electric motors, oven conveyors and other general uses. — LINCOLN ENGINEERING CO., 5701 Natural Bridge Ave., St. Louis, Mo.

217. DYNAMIC RESPONSE D-C MOTORS — Illustrated bulletin describes the new Reliance Super "G" Line D-c. Motors with Dynamic Response. Information is included on speed ranges, acceleration rates, enclosures, dimensions and selection data. — RELIANCE ELECTRIC & ENGINEERING CO., 1088 Ivanhoe Road, Cleveland 10, Ohio.

218. BALL BEARINGS FOR TEXTILE MACHINERY — A 40-page catalog illustrating Fafnir Ball Bearing units for replacement or new applications in all phases of textile processing. — THE FAFNIR BEARING CO., New Britain, Conn.

219. HYDRAULICS FOR TEXTILE MACHINERY Vickers Oil Hydraulic Power and Control offers accurate control, automatic tension control, variable speed, low power requirement, overload protection and many other features. Booklet describes all. — VICKERS, INC., 1033 Peachtree St., Atlanta, Ga.

220. ELECTRICAL AND LUBRICATING DEVICES — Catalog contains complete and descriptive data on all Trico electrical and lubricating devices. Profusely illustrated, it contains list price information. — TRICO FUSE MFG. CO., North 5th at West Chambers, Milwaukee 12, Wisconsin.

222. AUTOMATIC PRODUCTION CONTROL — Booklet by Reeves Pulley Company, shows application of many automatic processes and controls to the textile industry. Well illustrated, it contains engineering data quite useful to anyone interested. — REEVES PULLEY COMPANY, Columbus, Indiana.

223. LUBRICATION OF BEARINGS — Booklet entitled "Lubrication and Maintenance of Ball and Roller Bearings" gives helpful list of do's and don'ts to prolong bearing life. Also includes valuable information on storage and handling of lubricants.— NEW YORK & NEW JERSEY LUBRICANT CO., 292 Madison Ave., New York 17, N. Y.

229. DODGE GENERAL POWER TRANSMISSION MACHINERY — Catalog describes various types of power transmission apparatus by Dodge. Gives specifications, sizes, applications, and prices. Very comprehensive. — DODGE MANUFACTURING CORP., Mishawaka, Indiana.

232. "VARI-PITCH" SHEAVE BULLETIN — Stationary and motion control of "Vari-Pitch" sheaves for speed variation up to 76% by means of pitch diameter adjustment, capacities 1 to 600 HP are described in new bulletin. — ALLIS-CHALMERS MFG. CO., Milwaukee 1, Wisconsin.

235. JOHNSON LEDALOYL BEARING BRONZE — Illustrated booklet telling the complete story of Johnson Ledaloyl Bronze, the newest development in self-lubricated bronze for textile bearings and bushings. — JOHNSON BRONZE COMPANY, New Castle, Pa.

237. MOTOR CONTROL — Brochure gives description and engineering data on the Cutler-Hammer Motor Control for roving and spinning frames. Uses listed and advantages discussed. — CUTLER-HAMMER INC., Milwaukee, Wisc.

238. TEXTILE LEATHERS CATALOG — Catalog by J. E. Rhoads & Sons gives characteristics and advantages of Rhoads "Tannate" leathers. Complete line is listed and described, and tips for correct installation. Copiously illustrated. — J. E. RHOADS & SONS, 2100 W. Eleventh St., Wilmington 99, Del.

240. CATALOG OF NEEDLE BEARINGS—New catalog conveniently presents design, application and use data for five types of needle bearings. Actually an engineering short course on bearings with visual index units. — TORRINGTON CO., Torrington, Connecticut.

253. TEXTILE LUBRICATION — "Lubrication" a magazine published by the Texas Co. is available. Shows methods and means of lubricating chain drives in very comprehensive form. — THE TEXAS CO., 135 East 42nd St., New York 17, N. Y.

256. METERED LUBRICATION — Bulletin 6A has 12 illustrated pages showing how central lubricating systems are applied to combers, roving frames, winders, knitters, looms, etc. — BIJUR LUBRICATING CORP., Rochelle Park, N. J.

265. SERVICE PROCEDURE FOR BALL BEARINGS — A helpful manual for maintenance engineers giving helpful hints on disassembly, inspection, cleaning, lubrication, and replacement of ball bearings in any mechanism. — NEW DEPARTURE, Division of General Motors Corp., Bristol, Conn.

INSTRUMENTS, STEAM SPECIALTIES . . .

301. JOHNSON ROTARY PRESSURE JOINTS — Bulletin describing the rotary pressure joint which requires no packing, no lubrication and no adjustment, giving installation and maintenance instruction types, sizes, dimensions and prices. — THE JOHNSON CORP., Three Rivers, Mich.

302. TEXTILE INSTRUMENTATION—New booklet gives details on Brush Lancheck, Brush Tension Analyzer, Brush Imperfection Counter, and Improved Uniformity Analyzer. Pictures uses and capacities of each machine discussed. — BRUSH ELECTRONICS CO., 3405 Perkins Avenue, Cleveland 14, Ohio.

313. "THE FAIRBANKS VALVE COMPARISON CHART" — New reference manual important in specification, ordering, and using of bronze and iron-body valves. — THE FAIRBANKS COMPANY, 393 Lafayette Street, New York 3, N. Y.

321. RED RAY BURNERS — Bulletin describing use of Red-Ray Burners in preheating and partial drying to increase capacity of frame. — RED-RAY MFG. CO., 445 W. 45th St., New York, N. Y.

324. STROBOTAC — Informative reprint, "Strobotac Boosts Efficiency in Woolen and Synthetic Mills." — GENERAL RADIO CO., Cambridge 39, Mass.

337. COUNTING DEVICES — Catalog of Trumeter's complete line of counters for every application where counting, measuring or registering is required. Colored pictures illustrate each application. — TRUMETER COMPANY, 1265 Broadway, New York 1, N. Y.

339. NEW LUBRICATED PLUG VALVES — Illustrated booklet by The William Powell Co. features a new line of semi-steel and steel lubricated plug valves. Advantages include quick and positive shut off. — THE WILLIAM POWELL COMPANY, 2525 Spring Grove Ave., Cincinnati 22, Ohio.

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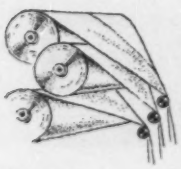

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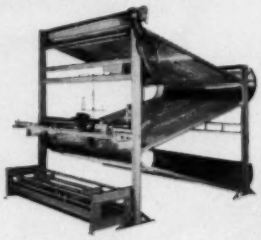

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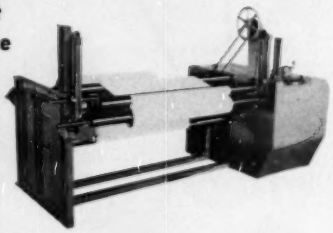

Designed originally for fibre glass cloth, to wind a hard, straight edged, wrinkle-free roll. Adaptable to all types of cloth.

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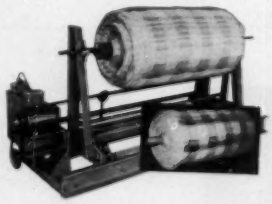
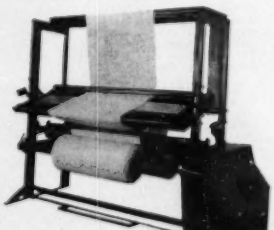


Automatic Let-off Guiding Unit

This unit feeds unevenly wound rolls of cloth or plastic batched material in a straight line into any machine, assuring a straight edged roll at the wind-up.

When set to line of selvage travel a sensing device actuates the automatic guiding unit electrically, which in turn moves carriage to feed material straight into machine.

Heavy Duty Measuring and Inspecting Machine



Stands the gaff of handling big rolls of cloth. Let-off and take-up can take rolls 36" in diameter. Frame is ruggedly constructed of 5" heavy welded channel steel. The let-off steel bar supporting brackets permit one man to load large rolls.

Variable speed drive 9 to 1 ratio gives exceptionally good speed control. Electric clutch and adjustable electric brakes for tension control; electric overrun prevention brake.

Optional Equipment

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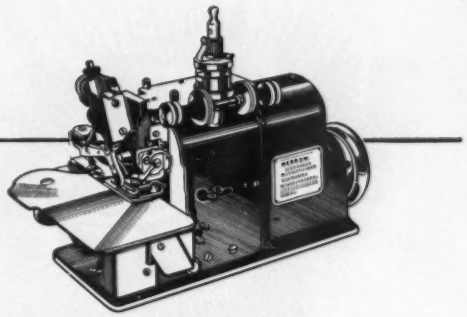

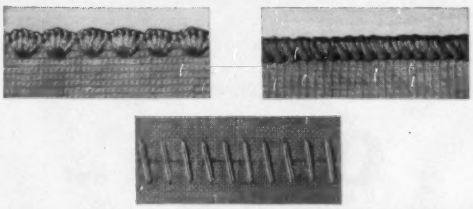

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401. LUMMUS DUSTLESS, STEEL BLENDING FEEDERS — Bulletin describing automatically closing, positively locking door on feeders to prevent overloading, choking. — ALDRICH MACHINE WORKS, Greenwood, S. C.

402. AUTOMATIC CLEANING AND OVERHEAD HANDLING FOR TEXTILE MILLS — 24-page bulletin describing the American Monorail Automatic Cleaner for preventing accumulation of lint on spinning, twisting, winding and warping machines. Also for cleaning monitors and card room ceilings.— THE AMERICAN MONORAIL CO., Cleveland, Ohio.

403. TRAVELING CLEANERS — 4-page bulletin describes the improved Parks-Cramer Frame and Room Cleaners including the Underframe and Floor Sweepers. — PARKS-CRAMER CO., Fitchburg, Mass.

404. LAPLESS ENDLESS SPINNER — Bulletin and full information will be supplied on lapless endless spinner and coning belting. — TON-TEX CORPORATION, 31 Columbus Ave., Englewood, N. J.

408. CARD GRINDING INFORMATION — Outlines care of grinders, instructions on speed to run grinders, amount of oil to add to machine and other pertinent information. — B. S. ROY & SON CO., Worcester, Mass., and Charlotte, N. C.

411. SHEET METAL WORK — Pamphlet describes spinning cylinders, aspirators, card screens, sheet metal specialties. — GASTONIA TEXTILE SHEET METAL WORKS, INC., 222 East Long Avenue, Gastonia, N. C.

412. SERVICE FOLDER — Folder covers textile metal products including spinning and twisting cylinders, card screens, etc. — JENKINS METAL SHOPS, INC., Gastonia, N. C.

413. HIGH SPEED, AUTOMATIC QUILLER — Color booklet by Schlafhorst describes the "Autoconer" Automatic Quiller. Gives advantages, space requirements, etc. — TERRELL MACHINE CO., INC., Charlotte, N. C.

414. WORSTED SPINNING — Bulletin explaining and illustrating Saco-Lowell's new System for worsted spinning, from top to yarn in five economical and efficient stages. — SACO-LOWELL SHOPS, 60 Batterymarch St., Boston 10, Mass.

415. DOUBLER-TWISTER FOR LARGE PACKAGES — Bulletin describing two new machines producing straight or tapered top bobbins. Suitable for filament or spun yarns up to three pound capacity. Individual thread stop motion fully discussed. — FLETCHER WORKS, INC., Philadelphia, Pa.

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421. CARD ROLL COVERS — Brochure describing the Davis seamless roll covers. Lists advantages, specifications and offers free trial. — THE TEXTILE LABORATORIES, P. O. Box 1003, Gastonia, N. C.

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423. SPINDLE OILING MACHINE — Information available on new Spindle Oiling Machine. Features include filter system to clean oil for reuse; smaller size for narrow aisles. — WICACO MACHINE CORP., 4800 Stenton Ave., Wayne Junction, Philadelphia 44, Pa.

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431. TEXTILE VACUUM SYSTEM — Color bulletin by Spin St Vac describes application of their vacuum system to drawing, roving and spinning processes, and for the removal of broken ends, fly or silver. Complete diagrams and shots of typical installations. — SPIN SA VAC CORPORATION, 1438 South Tryon St., Charlotte, N. C.

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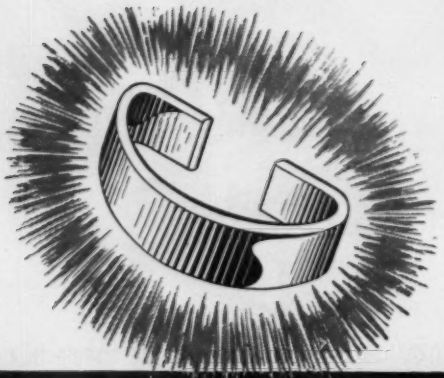
445. ROLLER BEARING SPINDLES — Illustrated booklet showing various types of Marquette Roller Bearing Spindles. The unique full-floating footstep bearing is pictured in cut-away views, and its advantages are described. — THE MARQUETTE METAL PRODUCTS CO., 1145 Galewood Ave., Cleveland, Ohio.

447. CONE WINDER — Form A95 describes the Foster Model 102 winder which produces the Foster knitting cone for spun yarns, warping cones and tubes for dyeing and twister supply. — FOSTER MACHINE COMPANY, Westfield, Mass.



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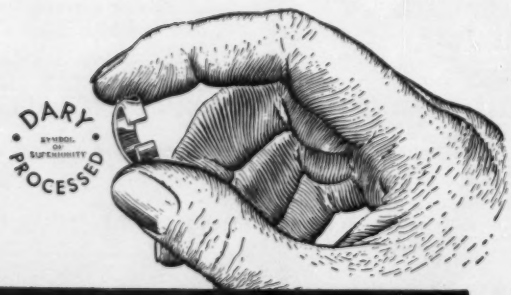

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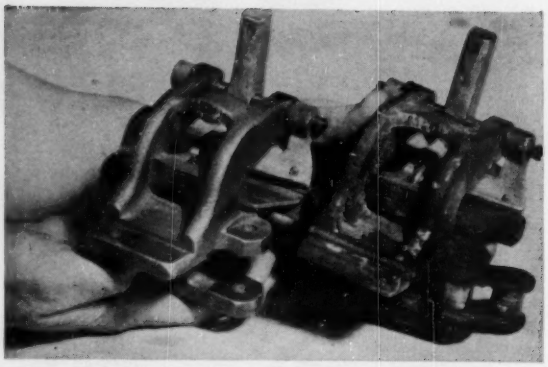

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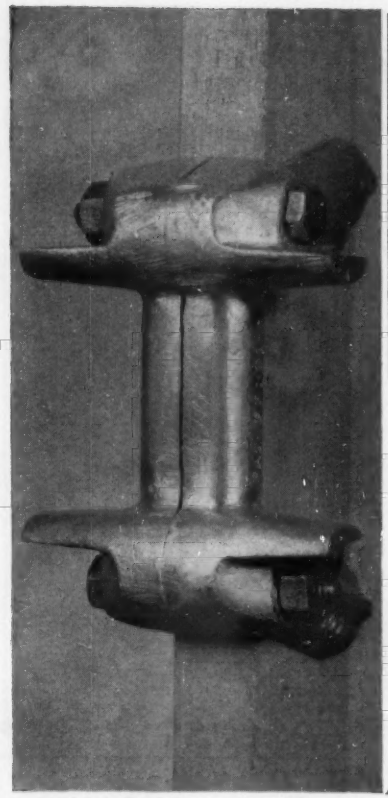

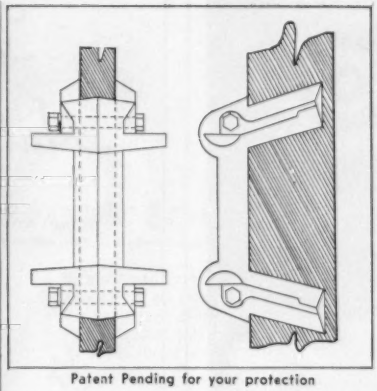

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467. CARD CLOTHING — 8-page booklet by Benjamin Booth Company describes Strip-O-Matic Card Clothing and its advantages. — BENJAMIN BOOTH COMPANY, Allegheny Avenue & Janney Street, Philadelphia, Pennsylvania.

469. SHORT CUT TO STAPLE FIBER SPINNING — Color brochure shows the ten steps in operation of the Turbo Tow Stapler, gives technical details and diagrams. — TURBO MACHINE COMPANY, Lansdale, Pa.

471. FACTS ABOUT YOUR FLYERS AND SPINDLES — Booklet by Ideal Machine Shops shows how smooth Flyer and Spindle operation can help produce higher and more efficient output, good quality yarn, minimum wear, and larger bobbins. — IDEAL MACHINE SHOPS, Bessemer City, N. C.

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474. BALL BEARING COMB BOXES — Southern States Equipment Corp. offers literature on their famous C-1 Ball Bearing Comb Boxes. Description, working principle, cut-a-way views shown.—SOUTHERN STATES EQUIPMENT CORP., Hampton, Ga.

475. TEXTILE ROLL COVERINGS AND MILL SUPPLIES — Color Booklet by Armstrong shows and describes their complete line of textile roll coverings, including also loom supplies, mill supplies, roll covering for Cotton, Silk and Synthetic and Woolen and Worsted systems. An excellent guide book. — ARMSTRONG CORK CO., Industrial Div., Lancaster, Pa.

476. TEXTILE FIBER OPENER FOR COTTON, SYNTHETICS, WOOL — New brochure by Cen-Tennial Cotton Gin Co. gives complete data on the Cen-Tennial Opener which incorporates improvements on the original SRRL Opener. Complete operating procedure is described. — CEN-TENNIAL COTTON GIN CO., Columbus, Ga.

478. TIPS ON CARDING PROCEDURE—Monthly bulletin by Ashworth Brothers includes many useful tips and advice on carding operation, maintenance and care and is available to anyone interested. Bulletin is a reprint of section appearing on green paper in this issue. — ASHWORTH BROTHERS, Fall River, Mass.

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508. LOOM PRODUCTION CHARTS — Convenient celluloid card showing yards per loom per week of 40 hours at various loom speeds. — RALPH E. LOPER CO., Greenville, S. C.

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511. ALUMINUM BEAMS — Catalog No. 1-21 describes Hayes magnesium and aluminum specialties for the textile industry. Illustrates this company's beams that are one-third the weight of conventional types. — HAYES INDUSTRIES, INC., Jackson, Mich.

514. THE STORY OF STARCHES — Semi-technical booklet tells the story of starches and information on how they are produced, the creation of new specialty starches, the unique "man-made" starch derivatives, and the handling of starches. — NATIONAL STARCH PRODUCTS, INC., 270 Madison Avenue, New York 16, New York.

515. WARPING, SLASHING, WEAVING ARNEL YARNS — 8-page booklet preliminary information on Arnel Triacetate Yarns. — CELANESE CORP. OF AMERICA, Textile Division, Box 1414, Charlotte, N. C.

517. LOADING SYSTEM — Bulletin 417, on pneumatic loading system for Saco-Lowell slasher size box squeeze rolls, contains installation photo, features, specifications, and prices. — THE FOXBORO COMPANY, Foxboro, Mass.

521. STEEL WARP BEAMS — 20 page Catalog No. 45 illustrating Standard and Special Purpose Warp Beams for the weaving industry, both broad-loom and narrow fabrics. Also Textile Machinery Specialties. — MILTON MACHINE WORKS, INC., Milton, Pa.

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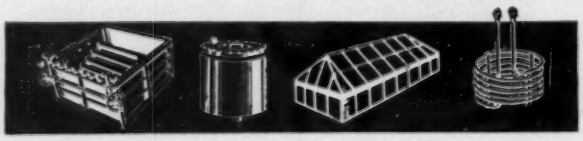

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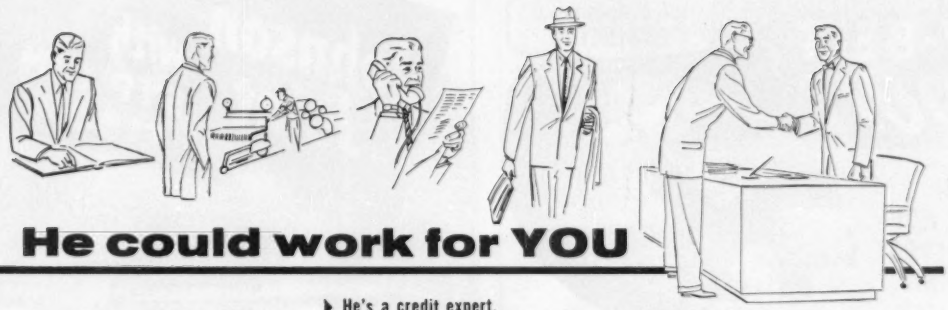

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602. CONTROLLED VAT DYEING — Calco technical booklet No. 828 discusses Stabilization of Vat Dyes at Elevated Temperatures, Instrumental and Analytical Measurements, Lenco Potentials. — AMERICAN CYANAMID CO., Calco Chemical Division, Bound Brook, N. J.

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637. BALL BEARING TURN TABLE — Leaflet describing this 48 inch diameter steel turn table for use in mills where the cloth is delivered in rope form to trucks and the trucks are placed in position ahead of a Scutcher or Cloth Opening Machine. Advantages discussed. — BIRCH BROTHERS, INC., 32 Kent St., Somerville, Mass.

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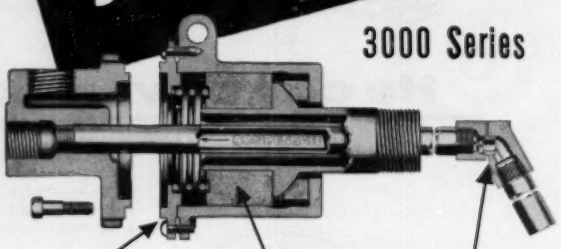

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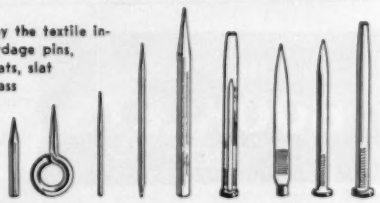

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653. GUIDERS AND TENSION DEVICES — Illustrated and described are the Mount Hope Precision Guiders and open width Tension Devices used for accurate, straight line guilding of open width goods. Bulletin 52-PG. — MOUNT HOPE MACHINERY CO., 15 Fifth St., Taunton, Mass.

658. BEAM MULTIPLE DYEING — Information on the Morton System Horizontal Beam Dyeing machine is available. Features include minimum handling of beams and the use of a common or individual dyebath for as many as six beams. — MORTON MACHINE WORKS, 1718 Third Avenue, Columbus, Ga.

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701. MAGNESIUM APPLICATIONS—Case history information on magnesium application in the textile field, published bi-monthly with latest developments in the magnesium industry. — DOW CHEMICAL CO., Midland, Mich.

704. FUNDAMENTALS OF INDUSTRIAL WATER TREATMENT PROCESSES — 24-Page booklet entitled "If You Use Water" discusses the fundamentals of the three major classifications of industrial water treatment based on ion exchange: softening, dealkalization, and deionization. — ROHM & HAAS COMPANY, Resinous Products Div., Washington Square, Philadelphia 5, Pa.

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714. NEW SODA ASH BULLETIN — 64-page edition contains both new material and revisions of previously used data covering the subject. — SOLVAY SALES DIV., 40 Rector St., New York 6, N. Y.

715. AQUAROL AND ARKANSAS PRODUCTS— Bulletin of Aquarol water repellent finish with method of preparing bath; also on other Arkansas products for cotton, wool, silk and yarn, hosiery processing. — ARKANSAS CO., INC., Newark, N. J.

719. WOOL OIL — Descriptive booklet on anti-static fiber lubricant, Twitchell 7421. Performance factors given particular emphasis are static control, scourability, lubricity and resistance to yellowing. — EMERY INDUSTRIES, INC., Dept. 5, Carew Tower, Cincinnati 2, Ohio.

720. INDUSTRIAL OIL — Bulletin catalogs all of Swift's Industrial Oil and Fatty Acid products. Included are detailed specifications, shipping information and suggested usage on products of animal, vegetable and marine sources. — SWIFT & COMPANY, Industrial Oil Department, 1800 165th Street, Hammond, Indiana.

721. SURFAX 1288 — Product data sheet explains this useful wetting and rewetting agent. Described as being water soluble at all temperatures and is a highly concentrated, economical surface active agent. — E. F. HOUGHTON & CO., 303 W. Lehigh Ave., Philadelphia, Pa.

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723. CHEMICAL CATALOG — Features detergents, wetting agents, emulsifiers, brighteners, sequestrants, dyeing assistants with chemical composition, properties and application. — ANTARA CHEMICALS DIV., General Aniline & Film Corp., 435 Hudson St., New York 14, N. Y.

724. WICA CHEMICAL BULLETINS — Bulletins describe in technical terms the various Wica Products for textiles. Issued each month for the benefit of industry, they are an excellent help in wet processing. To get on the mailing list write WICA CHEMICALS, INC., P. O. Box 506, Charlotte, N. C.

727. COLOR PRINCIPLES — Booklet available from Sandoz Chemical describes the fundamental principles of color and its measurement. Booklet has been adopted by several of the leading textile schools. — SANDOZ CHEMICAL WORKS, INC., 61 Van Dam Street, New York 13, N. Y.

729. STATIC AND STATIC CONTROL — Papers deal with historical background of static electricity and the problems caused by it along with methods of controlling them. — DEXTER CHEMICAL CORP., 819 Edgewater Road, New York 59, N. Y.

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745. RAPIDASE FOR DESIZING — Bulletin explaining in detail the properties and characteristics of Rapidase. — WALLERSTEIN CO., INC., 180 Madison Avenue, New York 16, N. Y.

746. INDUSTRIAL CHEMICALS — 24-page booklet listing alphabetically Harshaw industrial chemicals and applications. — THE HARSHAW CHEMICAL COMPANY, 1945 East 97th Street, Cleveland, Ohio.

749. WATER SOLUBLE GUMS — Booklet giving the origin, gathering, marketing and uses of water soluble gums. This booklet No. 23 is beautifully illustrated, and is one of the few treatises on the subject. — JACQUES WOLF & CO., Passaic, N. J.

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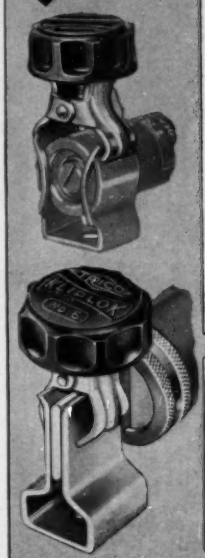

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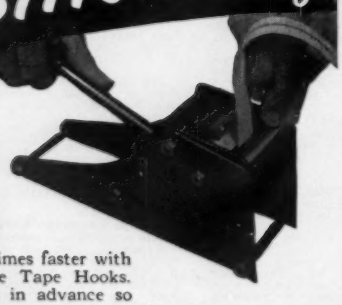
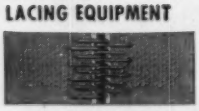


SPINDLE TAPE LACING EQUIPMENT



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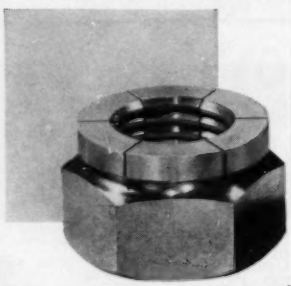

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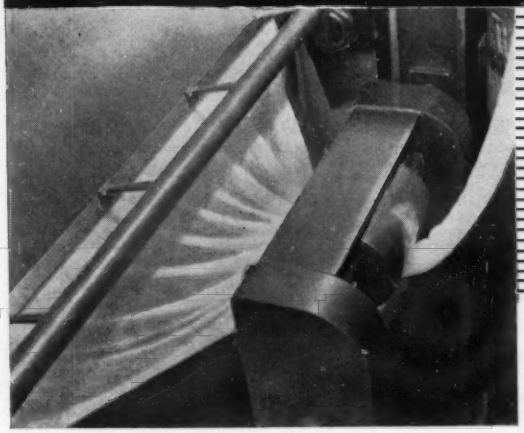

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769. SURFACE TENSION DEPRESSANT — The booklet, "Mercerizing and Alkamerce—The Ideal Dry" which can be used as a wetting agent; a dye leveling agent, a penetrant in package dyeing. — HART PRODUCTS CORP., 1440 Broadway, New York, N. Y.

774. ROYCE TEXTILE CHEMICALS — This booklet briefly describes the leading Royce products for textile processing, printing, dyeing and finishing. — ROYCE CHEMICAL COMPANY, Carlton Hill, N. J.

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800. SYNTHANE TEXTILE PARTS — Folder on laminated bobbins, pirns, headless package tubes, hosiery turning and examining forms, sizing bobbins, etc. — SYNTHANE CORP., 9 River Road, Oaks, Pa.

801. THE WILDMAN SINGLEHEAD FULL-FASHIONED HOSIERY MACHINE — Literature on request from the WILDMAN MFG. CO., Full-Fashioned Division, Norristown, Pa.

803. TIPS ON SEAMING NYLON STRETCH HOSIERY — Pamphlet lists in detail observations and suggestions on seaming nylon stretch hosiery prepared by Union Special as a result of findings of engineers in the field. — UNION SPECIAL MACHINE CO., 407 N. Franklin St., Chicago 10, Ill.

808. REINER WARPER — Full width and sectional warpers for all requirements in the knitting and weaving industry fully described in recent catalog. — ROBERT REINER, INC., Weehawken, N. J.

818. FORGED HEAD ALUMINUM BEAMS — Bulletin 49-A shows new beam capable of holding high yardage of nylon and rubber warps, with specifications. Also describes permanent mold aluminum tricot and section beams. — MILTON MACHINE WORKS, INC., Milton, Pa.

828. THE KIDDE KNITTER — Bulletin describing this newest in Raschel-type warp knitting machines and higher production attained with it. — KIDDE MANUFACTURING CO., INC., Farrand St., Bloomfield, N. J.

SEWING MACHINES . . .

924. BUTT-TACKING SEWING MACHINE — Booklet describes an operating installation of the Merrow single thread butt-tacking sewing machine. Gives performance data, and advantages of butt-tacking. — THE MERROW MACHINE COMPANY, 28 Laurel Street, Hartford, Connecticut.

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1006. LANE CANVAS BASKETS — 16 page illustrated booklet describing the Lane line of canvas baskets for textile use. — W. T. LANE & BROTHERS, Poughkeepsie, N. Y.

1007. OVERHEAD HANDLING EQUIPMENT — 56 pages of illustrations showing successful applications of monorail systems to meet every kind of handling problem. — THE AMERICAN MONORAIL CO., 13106 Athens Ave., Cleveland 7, Ohio.

1008. CASTERS AND WHEELS — An illustrated booklet with complete specifications showing a complete assortment of Cotton Textile Casters. — THE COLSON CORP., Elyria, Ohio.

1010. CONVEYOR KEY BOOK — A guide to production "step-ups" now possible with modern conveying. Shows time-and-effort savings. Well illustrated with photos showing plant layouts and sketches showing where, how and why different types of conveyors are used for maximum results.—LOGAN CO., 1115 Franklin St., Louisville, Ky.

1017. "HOW TO OPERATE A LIFT TRUCK" — Booklet gives information about the operation of a lift, truck, preventive maintenance, safety and basic materials handling. — HYSTER COMPANY, Portland 8, Oregon.

1018. BALL BEARING TROLLEYS — 20-page catalog by Link Belt describes entirely new line of ball bearing trolleys for overhead conveyors. Contains pictures, specifications charts and diagrams. — LINK-BELT CO., 307 North Michigan Ave., Chicago 1, Illinois.

1030. CDF RECEPTACLES — This 32-page catalog, R-11, profusely illustrated in color, shows Continental-Diamond's line of boxes, trucks, cans, barrels, baskets and trays. Complete description and specifications are given on each item. — CONTINENTAL-DIAMOND FIBRE CO., Newark 11, Del.

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1102. BALING PRESSES — An illustrated folder describing this manufacturer's complete line of balers for all materials. Both downstroke and upstroke models. — ECONOMY BALER CO., Ann Arbor, Mich.

1103. UNBRAKO SCREWS — Illustrated 16-page booklet No. 570 gives data on Unbrako hollow set screws, with knurled point, self-locking features. Includes miscellaneous screw and locking nut data.—STANDARD PRESSED STEEL CO., Jenkintown, Pa.

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1112. THE RANDOM WEB PROCESS — Bulletin No. 101 describes the Rando-Webber and Rando-Feeder machines, and discusses the origin and development of the Random Web process which produces a non-oriented web suitable for processing into felts, wadding, heavy mats and non-woven fabrics on a continuous basis. Engineering data and cutaway diagrams. — CURLATOR CORPORATION, Textile Division, 565 Blossom Rd., Rochester, N. Y.

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1115. TEXTILE WRAPPING MACHINES — Brochure describing automatic wrapping machines for various types of textile products, including the new Hayssen V-Type Underfold, most protective package made. — HAYSSEN MANUFACTURING CO., Sheboygan, Wisconsin.

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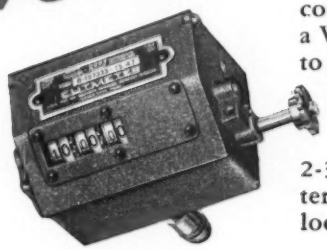

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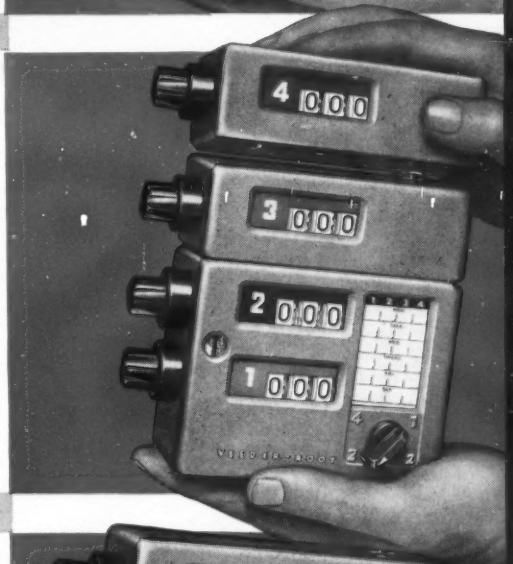

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